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THE NEW ETHICS

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WORKS BY J. HOWARD MOORE.



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LONDON: GEORGE BELL & SONS.

THE NEW ETHICS

BY

J. HOWARD MOORE

INSTRUCTOR IN ZOOLOGY, CRANE MANUAL TRAINING HIGH SCHOOL,
CHICAGO

'Thoughts that great hearts once broke for, we
Breathe freely in the common air.'

LONDON
ERNEST BELL, YORK HOUSE
PORTUGAL STREET, W.C.

1907

Reader, if thou hast learned a truth which needs
No school of long experience—that the world
Is full of guilt and misery—and hast seen
Enough of all its sorrows, crimes, and cares
To tire thee of it, enter the wild wood
And view the haunts of Nature. The calm shade
Shall bring a kindred calm, and the sweet breeze
That makes the green leaves dance shall waft a balm
To thy sick heart.'

BRYANT.

PREFACE

WHEN Harvey discovered the circulation of the blood, physicians over forty years of age refused to credit the discovery. It was the younger men of the time who had the independence of mind to welcome and understand the new idea.

This is a simple illustration of a frightful truth.

The adult mind, with few exceptions, is a dead mind—a thing that has ceased to assimilate beyond the range of certain fixed habits.

The most hopeless chains are those of which we are unconscious. The darkest slavery is that which binds the human brain.

I appeal to the hospitality of the unenslaved for understanding of this message—to the men and women who have not yet passed into the solid state.

CHICAGO, 1907.

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To

TESS

WHO HAS EVER BEEN LOYAL

TO THE CAUSE

OF A BETTER WORLD

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THE NEW ETHICS

CHAPTER I

THE NATURE OF OPINION

No being can believe a thing or can keep from believing a thing by simply deciding to do so. Psychic phenomena, like all other phenomena, take place according to fixed laws. The notion that opinions are formed by an arbitrary act of the mind, and are not related causally to the conditions from which they come, is as unsupported by fact as that other supposition, once universally held, but now about outgrown, that events in the physical world just happen without any necessary connexion with each other, or with the circumstances from which they come.

Opinion is the assent of the mind to that side of a proposition which seems to the mind to present a preponderance of evidence. But which side of a proposition seems to any mind to present a preponderance of evidence depends on the

character and contents of the mind—on its natural architecture, its axioms and impulses, and the general ways of acting which it has during its existence fallen into. So true is this that a person of special experience in advocating a proposition comes to know beforehand with considerable certainty, not only whether his proposition will be accepted or rejected by a given type of mind, but also with what degree of enthusiasm and for what special reasons it will be accepted, if it is accepted at all, and about what brand of objections will be made to it if it is rejected.

Opinion is a matter of temperament, a matter of articulation. The mind approves that which is in harmony with itself, that which resembles itself, and rejects that which is antagonistic and alien. Ideas go in sets. When a proposition is presented to the mind, the mind tries it. If the proposition fits, the mind accepts it, and it becomes a part of the mind's paraphernalia. If it does not fit, it is rejected. It is as impossible for a mind, constituted as mind is in men, to accept a proposition that is antagonistic to it as it is for it to refrain from accepting one that is agreeable.

An opinion is a relation, nothing more—a relation between a certain consciousness and a certain proposition. And what that relation is depends on the character of the consciousness and the nature of the given proposition. Whether an opinion is favourable or unfavourable does not depend on the intrinsic truth or falsity of the proposition concerning which the opinion is held,

but wholly on the affinity or the lack of it existing between the mind and the proposition. Indeed, if a mind is composed of error, the more truth contained in a proposition, the more likely is the proposition to be rejected by that mind.

An opinion, therefore, is not simply a reflection on a proposition, but an equally important commentary on the individual holding the opinion. This is a fact which it would be well for human beings generally to put a tack in. For if people came to realise that opinions are not final judgments on propositions, and do not necessarily settle things, but are, as much as anything else, merely emissions which indicate the inner character of their minds, they might be moved to be a little more economical in their discharges, and possibly even in time incited to the precaution of requiring that they know something about a subject in order to have an opinion on it. Most people give out their opinions with the degree of moderation that the sky manifests when it pours, and with a confidence in their ability to end matters by the simple expression of these opinions about equal to that with which the average school youth sails into Herbert Spencer. How often it is the case here on the earth that the more an individual knows, and the better qualified he is for forming correct and valuable judgments, the more modest he is about expressing his opinions, and the less sure he is when he comes to a conclusion that he may not, after all, have overlooked facts having an important bearing on the matter under con-

sideration ; while, on the other hand, the one who is always ready with an opinion on everything that comes up, and who is so sure of his infallibility that he is offended if his deliverances do not meet with instant and unqualified approval, is an individual who is about as scholarly and on the whole about as well fitted for his favourite activity of rendering final decisions on things as a chicken with its head cut off !

We get our opinions as we get the measles : we take them from those around us—from our neighbours and friends and fellow-citizens, and especially from our parents. Every new human being who comes into existence finds himself at birth in the midst of a certain set of ideas. These ideas pour in upon him. He breathes them, eats them, floats in them, and finally becomes completely composed of them. Children inherit the religious faiths, the political beliefs, the social habits and conceptions, and the occupational activities of their ancestors—not because these things are model or ideal or the best there are in the world, but simply because they happen to have belonged to those who gave them beginning. If they had come forth from other loins, or in other lands or times, other beliefs and prejudices and other fates would have awaited them. Oh, the lottery of it ! How pitiful ! Kneaded into this thing or that thing, or some other thing, by the circumstances that happen to be standing around when we come into the world ! It is the duty of men to be comparative, to strive to rise

above the local bias that happens to be epidemic in the age and land in which they spend their existences, to be universal and eternal.

Psychic structures have arisen on the earth in the same way precisely as physical structures have—as a result of the interaction of hereditary and environmental tendencies. And if these two sets of tendencies had been different from what they have been, the products of their interaction would have been correspondingly different from what they are. There is a great deal too much talk about ‘absolute truth,’ considering the limited amount of this abstraction in the world. Truths struggle, and those that exist do so simply because they are the fittest to survive, just as in the case of cockroaches and everything else. It is about time for us to recognise, in a much more sweeping manner than we have ever done before, that the operations of our minds are all determined by tendencies which are as immutable and cosmic as those more material tendencies which superintend seasons and constellations.

What the mind of any individual or race contains, and the manner in which these contents are arranged, depend on two things: the structure with which the individual or race came into existence, and the experiences through which the individual or race has passed since coming into existence—in short, upon heredity and environment.

But no two individuals or races ever commence existence with the same antecedents, or spend

their lives in surroundings that are precisely alike. Hence, no two individuals or races are intellectually identical.

Out of this fact—the almost infinite variety in human mind—arises the almost infinite variety in the opinions held by men regarding truth and duty. Different individuals and races have different opinions on the same proposition, simply because the proposition sustains to the mental make-up of each a different relation; and the same individual or race at different periods of time may have different opinions on the same proposition, owing to the changes in mental composition taking place from one period of time to another.

Travel over the earth. Take any set of propositions bearing on science, art, politics, religion, or philosophy. And as you pass from people to people and from land to land every conceivable variety of opinion will be found to exist regarding the propositions. In some places some of the propositions will be accepted and the rest rejected, while in other places another part of them will be endorsed and the others rejected. In some places, again, all of the propositions will be approved, while in other localities they will be disapproved. And about the same variety will be found in passing from one individual to another in the same locality. Different minds are tempered differently, and are not affected in the same way by the same thing.

Assert the propriety of bull-baiting in the city

of Mexico or Madrid and the proposition will be assented to instantly, because the proposition is in harmony with the semi-civilised character of the Spanish-Mexican mind. Assert the same proposition in London or St. Petersburg and it will promptly be rejected. Tell an American he should have but one wife and he will unhesitatingly agree to it (unless he is a Mormon), because monogamy is the only thing that harmonises with the social and religious conceptions of an American. But say the same thing to the Sultan of Sulu, whose mind is unbiased by Caucasian notions, or to the Sheik of the Ashantees, whose legal allowance is 3,333 wives, and he will laugh at you and look upon you as being either a fanatic or a ninny. In North Germany, where the population is Protestant, the proposition that the Pope is infallible will be regarded in a manner the very opposite of what it will be in South Germany, where the inhabitants are prevailingly Catholic. In Cairo or Constantinople the assertion that Mahomet was a prophet of God and a worker of wonderful miracles is not only accepted as true, but it is accepted with such intense conviction that no amount of argument is able to produce any effect upon its adherents. In Rome or New York the same assertion is scarcely considered even worthy of denial. In India the greatest human being that has ever lived on the earth, the being who is believed to have represented deity in human form and to have been the saviour of mankind, is Krishna; in Ceylon and China Buddha is looked

upon in the same light ; in Persia it is Zoroaster ; in Europe, Jesus ; and in Utah, Smith. Five hundred millions of men—one-third of the human species—believe Buddha to be their lord and master, their saviour and ideal, and the saviour and ideal of the human world ; between three and four hundred millions look upon Jesus in the same way ; and two hundred and forty millions so regard Krishna.

If anyone lacks a vivid realisation of the relativity of human opinion, let him write a book and send out a few press copies for review and read over the results—the most amazing, amusing, and pathetic jumble of contradictions, probably, that he ever read or heard of. Each opinion is different from all the rest, and each is formulated with the evident conviction that it is somewhere in the immediate vicinity of the absolute truth, if it is not the very thing itself. The author of the book, who sees the whole set of opinions, recognises in each opinion only the personal reaction of a particular consciousness to a particular plexus of propositions—a reaction determined not by any absolute standard or law, as the reviewer in each case supposes, but by the particular architecture of his individual prejudices.

Kindness, honesty, truthfulness, industry, chastity, and the like, are prevailingly regarded by mankind as virtues, as beautiful things, as excellences to be approved and practised by men. But there are many peoples among whom the opposite of these—lying, cheating, aggression,

idleness, and adultery—are virtues, the things men practise and admire.

It is said of the Figians that ‘the propensity to lie is so strong that they seem to have no wish to deny its existence’ (1).* ‘I have never found a native of Central America,’ says Dunlop, ‘who would admit that there could be any harm in lying, and when one native has succeeded in cheating another, however gross or infamous the fraud may be, the natives will only say: “What a clever fellow!”’ (1). I am not sure but we find a good deal of this same grade of moral grandeur in the psychological privacies of men all over the world.

It is an accepted proverb among the Bilochs that ‘God will not favour a man who does not steal and rob’ (1). Some time ago Mr. Baer, President of the Coal Trust, informed mankind that God had favoured him and the other members of his gang with the custody of the coal-fields of Pennsylvania. I wonder if this anthracite courtesy of the Heavenly Father to the coal barons could have been a reward to them for their signal devotion to some such proverb as this of the Bilochs.

In speaking of the Dakota Indians, Burton declares that ‘the warrior is so lazy he will not even saddle or unsaddle his pony, and he would rather die than employ himself in honest industry’ (1). The Kaffir considers his wife to be his ox—a being whom he has bought and paid for, and whom he

* Figures in parentheses () refer to numbers in the bibliography.

has a right to compel to work. A similar conception of women is held by nearly all savage peoples. Savage men marry as many women as they can in order to have as many persons as possible to work for them. The women are commonly the chief sources of savage wealth, for they are the only ones who do productive work. The business of the men is to fight, to adorn war councils, to boss their wives, and to contemplate their own unrivalled importance in the general economies of the universe.

Among the Eskimos, where the men do the fishing and hunting and the women do all the real drudgery, the hunter never troubles himself about his booty after having brought it to the shore ; for it would be a stigma on his character if he so much as drew a seal out of the water—almost as much of a stigma, I suppose, as it is for a temperate latitude white man to help his wife wash.

Among these same people 'it is considered a great mark of friendship for two men to exchange wives for a day or two.' Borrowing and loaning wives was a common practice also among the ancient Spartans. And among many natural peoples to-day it is a custom well known to all travellers for a man to offer his wife, daughter, or maid to anyone he happens to take a liking to.

So varied is the human mind, owing to the almost infinite variety in human heredity and environment, that it is almost impossible to frame a proposition so plainly righteous that it will not

somewhere on the face of the earth be rejected by men, or to formulate one so absurd or monstrous that it will not somewhere find fitness and exemplification.

Since individuals and races have or are likely to have at one period of their existence a very different mental composition from what they have at another, it follows, as a second corollary of the main truth of this chapter, that the same individuals or races have or may have at different periods of their existence different opinions regarding the same proposition. Individuals and races change with time. They evolve—the most of them, anyway. They grow in knowledge and understanding. Every human being who has mobility is moving, either forward or backward; and every one who is going forward is likely to be arriving with greater or less regularity at that stage of development in which he looks with loathing and incredulity upon his former opinions, and is disposed to accept those which from a less advanced point of view seemed preposterous. The proverbial difference between the philosopher and the fool in faithfulness to their former opinions is due to the fact that the philosopher has new facts constantly arriving from fresh fields opened to him by his constantly widening horizon, while the fool does not.

There is a good deal of prejudice in the world against individual evolution. It is commonly felt to be something bordering on crime for a person to revise himself, to change his attitude toward

Resolution = purpose

the universe, even though it be in the light of a far riper experience. The apostate is a terrible fellow. It is considered more honourable to remain steadfast through life to the doll and stick-horse notions so generously packed away in our little noddles during the credulous years of childhood than it is to be hospitable to new ideas, even though our childhood inheritances be from two to twenty-five generations behind the times.

But there is a good deal of individual evolution going on, anyway, especially on the sly. Men are more progressive often in the privacy of their own minds than they have the courage to announce publicly, and the practice of growing is bound to become more popular and above-board as soon as it is well enough understood to be respectable.

It is the same way with races as with individuals. Races evolve. They cast their skins, like snakes. They arrive at new ways of looking at things. They receive revelations. Their ideals change. Old forms of thought fall away, and are succeeded by new ones, like the leaves of recurring summers. Shrines at which one generation adores become to succeeding ages desolate and despised. The earth is filled with neglected idols, mouldering and untenanted temples, moribund philosophies, dilapidated creeds, discredited heroes, wilted enthusiasms, and dead gods. The human mind, excepting in a few localities like Greenland and Spain, is engaged in the rather expensive, but, after all, paying, avocation of repudiating that which it

formerly believed and of accepting that which it has previously looked upon as absurd.

Every great truth to-day cherished by mankind was in its infancy stoned and spat upon, and the most monstrous fictions have at one time or another been mistaken for truths. The world is a blind man, and to a blind man a truth looks like a vegetable. That the world we live on is not flat, but spheroidal; that it is moving; that the sun (not the earth) is the chief of our band of spheres; that the earth and the life on it are very old, and have evolved to be what they are; that matter and tendency are immortal; that the human blood circulates; that insanity is not caused by the devil; that man is an animal; that kings are not little gods; that education is a good thing for the 'common herd'; that the masses of men and women have feelings and rights and chances of heaven—all of these propositions, and scores of others, which are to-day generally accepted as matters of course, have been at one time or another so bitterly assailed that men in many cases took their lives in their hands who affirmed them.

New ideas make their way into the world by generations of elbowing. They make themselves known to the eminences first, and from these upper places they spread laboriously to the lowlands. One can hardly help thinking, as he looks back over the evolution of human thought and sees the persecution and blindness through which the race has made its way, that very few human

beings possess as adults that degree of sagacity that ought rightfully to have accompanied them into the world. It is not a fact to be proud of, certainly, that we live in and are confined to a world where every new truth that comes into it has got to sneak in on its hands and knees, and where there is so little encouragement to genius and originality that

‘A man is thought a knave or fool,
Or bigot plotting crime,
Who for the advancement of his race
Is wiser than his time.’

CHAPTER II

THE THESIS OF THE NEW ETHICS

THE inhabitants of the earth are bound to each other by the ties and obligations of a common kinship. Man is simply *one* of a *series* of sentients, differing in degree, but not in kind, from the beings below, above, and around him. *The Great Law*—ACT TOWARD OTHERS AS YOU WOULD ACT TOWARD A PART OF YOUR OWN SELF—is a law not applicable to Aryans only, but to *all* men; and not to men only, but to *all beings*. There is the same obligation to act toward a German, a Japanese, or a Filipino, as one acts toward a part of his own organism, as there is to act in this way toward Americans or Englishmen; and, furthermore, there is the same reason for acting in this manner toward horses, cats, dogs, birds, fishes, and insects, as there is in acting so toward men. Restricting the application of this all-inclusive injunction to the human species, or to some favourite fraction of this species, is a practice dictated solely by human selfishness and provincialism. The restriction is made, not

because we are logical, but because we are diminutive.

How would it be for ants or elephants, or some other distinct group of the inhabitants of a world, to cut themselves off ethically from the rest, observing in their conduct toward each other *The Great Law* of social propriety, but ignoring this law in their conduct toward others, and acting toward all others, although these others were like them in every essential respect, as if they were without any of the ordinary rights and sensibilities of a common consciousness? Is it probable that men would have any difficulty in seeing clearly the untenableness of such an attitude? And yet it would be just as logical for any other group of animals to do this as it is for men to do it. The philosophies of this world have all been framed by, and from the standpoint of, a single species, and they are still managed and maintained in the interests of this species. What insects! The breadth of human sympathy and understanding is the catholicity of katydids who never see beyond the hedgerows that bound the little meadow in which they sing their lives away.

Moral practice and understanding are everywhere tribal and antagonistic. They have been *inherited, not reasoned out*. They have been handed along to us, not generated by us. They have come about as a result of the militant condition of things in the midst of which and in conformity with which life has been developed on the earth.

The ideal conception of social obligation is

bigger than family and friends, bigger than the city and State in which one happens to be born and raised, bigger than species, bigger even than the particular world of which one is a tenant. *There are no aliens anywhere*, not even in hell, to the being who is as big morally as he ought to be—*only brothers*. The universal heart goes out in tenderness beyond all boundaries of form and colour and architecture and accident of birth—into every place where quivers a living soul. *The Great Law* is for the healing and consolation of *all*. *Moral obligation is as extensive as the power to feel*.

This thesis is generally rejected by mankind, especially by the Western world. This rejection does not mean that the proposition is false, nor that it will always be rejected—merely that the proposition is not in harmony with the human mind, *as the human mind is at present constituted*. The human race has come out of the night, the night of selfishness and animality. It is moving toward altruism. It has yet a long, long journey in front of it. Oh, the years, the weary years, of struggle and misunderstanding before we shall stand on the highlands of Real Civilisation—*redeemed*! And how little and heathenish in that time we of to-day shall seem away back here in these distant, ignorant, damnable old times! I sometimes get glimpses of a world of human feeling and understanding so far in advance, so improved and perfected, that my own teachings seem obsolete in comparison.

The human race is at the beginning of its

career. It stands blinking and rubbing its eyes in the dim morning of the ages; and it is perfectly natural that a thesis so comprehensive and final as the one here advocated should be too much for the hearts and minds of men, which are for the most part, not only not even half baked, but scarcely in the batter stage of development as yet. Not many men are gentle enough, not many are far enough away from the ideas and instincts of the jungle, to see and feel the solidarity of their own species; and how can such be expected to understand the wider and far more difficult generalisations of *universal solidarity*?

The only way of judging what the universe is going to do or to become in the future is by what it has done and what it has been in the past; and looking at the future in the light of this past, it may be asserted confidently that the time will come in the flowering of the human mind when anthropocentrism, with all of its black practices and implications, will have passed away in the dawning of a grand humanitarianism. Behind and beneath the doctrine of universal ethics is the entire ethical progress of the race, the accumulated momentum of all social evolution. The evolution of ethics in past time has been, all of it, in one uniform direction—towards altruism, towards a wider and more consistent recognition by dominant individuals and groups of the rights of others. The effort to *universalise* the moral sentiments and practices of mankind is an effort to add to the altruistic accomplishments already attained, and,

as such, is a logical sequence of that series of efforts which have in past times been put forth by the race to humanise itself. It is inconceivable that the tendencies of altruistic evolution, which have already acquired such momentum and achieved so much, will ever atrophy, or that that saviour-like something within us, which shapes our ideals and redeems us, will endure everlastingly a planetful of fratricides.

The thesis of the New Ethics is the ethical corollary of the doctrine of evolution. It is simply the expansion of ethics to suit the biological revelations of Charles Darwin. The present ethical conception is based on the pre-Darwinian belief that all other species of animals and all worlds were produced for the exclusive benefit of the human species. It is anthropocentric. It originated among primitive peoples. It has come all the way down through the centuries, not because of its beauty or its fitness for immortality among ideas, but because of the excellent opportunities each generation has had of inoculating each succeeding generation with anything it has had a mind to.

Biology teaches, if it teaches anything, that there is a solidarity of the sentient world. Man is simply the highest product of a long process of evolution, and his qualities of mind and heart extend all along down among the antecedent forms through which he has come. The ox he slays, the horse he bestrides, the insect he bayonets with a pin, the fish he deceives, the moth that

dies in his evening light, and the poor serpent that flees from his footsteps, are his kindred, partaking of his frailties and sharing his worth. No being is utterly unlike or utterly unrelated to any other being. The spider catches its prey in a net, and eats it like the fisherman; the lover plagiarises the linnet; and the humble beetle that rolls its loathsome ball along dusty driveways is a brother of the proud-stepping aristocrat.

The insect that flutters out its little existence among the prairie flowers, and whose nervous architecture is seemingly so different from man's, is attracted by the same bright colours, and delighted by the same sweets and perfumes as those that entertain the senses of man. The honey stored by the flower for the bee, and by the bee gathered for its own use, is stolen and eaten by man himself. The thyme and lavender, the rose and jasmine, so alluring to the butterfly and bee, are the very things men choose to sweeten and adorn their own abodes.

'When I consider the general continuity of nervous structure throughout the whole animal kingdom,' says the talented author of 'The Evolutionist at Large,' 'and the identical stimulus in each instance, I can hardly doubt that the butterfly really enjoys life somewhat as we enjoy it, though far less vividly. I cannot but think that he finds honey sweet, and perfumes pleasant, and colour attractive, and that he feels a light-some gladness as he flits in the sunshine from flower to flower, and knows a faint thrill at the

sight of his chosen mate. Still more is this belief forced upon me when I reflect that, save only in a few aberrant types, sugar is sweet to taste, and thyme to smell, and song to hear, and sunshine to bask in.'

'How strange is human pride !
I tell thee that those living things,
To whom the fragile blade of grass,
That springeth in the morn
And perisheth ere noon,
Is an unbounded world—
I tell thee that these viewless beings
Think, feel, and live, like man ;
That their affections and antipathies,
Like his, produce the laws
Ruling their mortal state ;
And the minutest throb
That through their frames diffuses,
The slightest, faintest motion
Is fixed and indispensable
As the majestic laws
'That rule yon rolling orbs.'

SHELLEY.

There is scarcely a terrestrial being, except man, but thinks, feels, and realises far more than it is suspected of doing. Read the writings of Forel, Lubbock, and others, who have associated with ants, bees, wasps, and spiders, and you will realise how little the average human being really knows about the wonderful life and activities of these diminutive millions. Talk with the keepers of aquaria, and they will tell you invariably that fishes have far more intelligence than the ordinary human being credits them with. And they will

assure you, too, that it is the same kind of intelligence, only differing from it in degree, as that displayed by higher vertebrates, including man. Talk with dog-fanciers, pigeon-fanciers, and keepers of menageries, and other habitual associates of birds and quadrupeds, and they are astonished at the silly assumptions strangers make as to how little their charges know, and feel, and realise. Our knowledge of the psychic phenomena of seals and whales, antelopes and foxes, squirrels, rats, rabbits, birds, bears, beavers, apes, horses, elephants, and other higher animals, is about as definite and reliable as our information regarding the civilisations of Saturn, as those who happen to have associated with these beings sufficiently to really know them have testified.

I have myself never associated with any new kind of animal for a long enough time to become familiar with it but what I have been *ashamed* of the little, the almost nothing, I have up to that time known of it, and of my utter unfitness previous to such association to judge, understand, or appreciate it. Each new creature has been a new world, which I had hitherto known in name only. It is the arm-chair psychologist and metaphysician who never associates with anything or anybody, except books and men, who is certain that there is no feeling or intelligence to amount to anything outside of his own species—not the men and women who associate day after day with these beings, who get their knowledge at first hand, and whose testimony is really more authoritative

than the opinions, however pompous and fine-spun, of all the psychologists in the solar system.

I have been watching the bumble-bees as they fed on the columbine blossoms in the garden. The honey-spurs of these flowers, especially of the more highly cultivated varieties, are too deep to be plundered easily by these insects in the ordinary way. And I notice that, while most of them feed naturally by entering the flower from the front, some go to the back of the flower and thrust their proboscis through the side of the honey-cup straight into the nectar, avoiding in this way the difficulties of the long reach. It is a bandit act, of course, for the sweets of the flower are taken by the bee without any compensating service to the flower; but it shows that these supposedly blank and not-much-attended-to insects are, after all, intelligent enough to meet emergencies sometimes, as well as wiser folks. Nearly every columbine in the garden has one or more of its honey-cups mutilated by the successive pricks of these brigands.

This is not instinct. These bees were not born with a knowledge of this improved method of depredation. It is an act of intelligence. Those who do it have *learned* to do it. It is simply a means hit upon by the experienced to save and effectualise labour. And there is nothing remarkable either in the fact that they do not all adopt the improved methods, when these improved methods are in operation right before their eyes. For that is the way with men. Do we not find

the reap-hook and the harvester, the straight stick and the steam plough, in adjoining communities, and sometimes almost in the same field; and superstition and sanity, cannibalism and humanity, side by side in the same neighbourhood and family? There is a lot of stupidity, a lot of machinery, a lot of facilities for doing things in an unthinking way, in the heads of men as well as in the hymenoptera.

Have you ever watched a fly 'wash' itself, and been so close to it that you could see every little detail of its doings, and every expression of its miniature body, and almost look right down into the states of its tiny soul, as if it were a human being? I watched one a few days ago making its toilet on my hat, which lay beside me on the grass in the park. It was a dog-fly, with its glossy black 'bill' sticking straight out in front of it. How interesting and real it all was! Not a part of its beautiful little body that it did not visit in turn with those wonderful brushes and combs.

First its face and neck, using its front pair of limbs, 'scrubbing' time after time, so quickly that I could scarcely follow it with my eyes, and with such exquisite skill and daintiness as I had never before seen, each time pausing to clean its invisible brushes by drawing them back and forth over each other as they were held out in front of it; then its wings, those wondrous films, using its hindmost limbs, first the under surfaces, then the upper, then along the back and sides of its shining little body, always cleaning its brushes after each effort in that

amazingly dexterous way; finally its abdomen, which it held high in the air, 'scrubbing' and 'massaging' until every atom of dust, it would seem, were cast from its unseen setæ. How elegant and refined and intentional it all seemed!

The little creature stood in the sun not over a foot from my eyes, and I could see every mood and attitude with perfect distinctness. It was always watchful, alive, and conscious. Once another fly lit on the hat, and as quick as a wink away they both darted for a second or two, circling somewhere in the sunny airs. Once it stopped suddenly in the midst of its activities, braced itself ready for instant flight, and stood as if transfixed, holding its front feet free in the air, while an event went by which I suppose seemed to it to have danger in it—like a boy standing with half-open mouth and bated breath gazing inanimately at something that has suddenly fixed his attention.

Poor little hexapod! with your wee ways, your exquisite little body, and your toy-like soul! I wish I were acquainted with you and understood you. I wonder what you thought of me stretched out there on the landscape; and I wonder what you think of the other big masses of inhospitality like me that you see moving about in the world? I suppose it seems to you very 'small' for us to grudge you the little drink of sweet red wine you ask, when we are so full of it, and your poor little aching stomach is so empty. How I would like to go with you through the days and nights of your little summer life and learn all the secrets of your

marvellous circlings! I wonder if you are often hungry? And I wonder if you are as lonely as I am in the world, poor little living, overlooked one? But you are not overlooked by yourself, are you? nor by the other flies that wheel with you in your mazy circlings? I know how precious you are to yourself, though you cannot tell me in words, by the interest you take in yourself and the anxiety you have for your life. I know you are the most real and important being in the world—the centre of this universe, where we are all, like you, pulling and hauling for importance.

No one who has read 'My Dogs in the Northland,' by Dr. Egerton R. Young, will ever forget Jack, the great big, sagacious, almost human Newfoundland dog, who was the faithful friend, companion, and guide of the veteran missionary during his many years of wandering in the regions of Lake Winnipeg and Hudson Bay. This intelligent canine understood nearly everything that was said to him, like a human being. He carried in wood whenever he was told to do so, and often did it without being told when he saw it was needed, and he was much pleased when appreciation was shown for his services. He went to market and brought back his well-filled basket as faithfully as a human servant. He could open and shut every door in the house, and always knew when he was the subject of conversation as well as anybody. The heroism and superior sense of this remarkable character literally saved the missionary and his party from freezing to death one cold

winter day, when they were caught suddenly in a terrible blizzard on the ice-wastes of Lake Winnipeg. 'We buried him,' says Dr. Young tenderly, in telling of his death, 'at the foot of a beautiful Canada maple. And if, as John Wesley and other men believe, there is to be a resurrection for the animal creation, surely Jack deserves to take part in it. And why should he not do so?'

There have been in this world few companionships of any kind more touching and beautiful than that between Mr. George Wharton James, of California, and Scraggles, a little baby song-sparrow, which had been accidentally orphaned, and which Mr. James came upon one day, and took home with him and raised. The poor little waif was at first very much afraid, and resented vigorously the advances of her new-found friend; but, through kindness, her little heart was won, and henceforth there sprang up between her and her human friend a wonderful attachment. She became so fond of Mr. James finally that she wanted to be with him all the time, day and night, and became disconsolate whenever she was separated from him. She soon became familiar with Mr. James's desk habits, and could tell whether he was reading or writing. When he wrote, she liked to frolic with his pen, taking the pen into her beak and holding on to it, as he traced the lines across the paper, and contending with Mr. James for the privilege when he playfully pretended to keep her away. Often, when

tired, she would sit on his shoe or the finger of his left hand, sound asleep, while he wrote. She would sit this way for hours at a time, seemingly perfectly content merely to be in the presence of her precious foster-parent. She would follow Mr. James on the street as devotedly as a dog, and would flutter down into his hand as if it were a nest, and peck at his fingers until he would 'hover' her with his other hand, when she would give herself a little shake, put her head under her wing, and drop off to sleep.

'The poor little creature was never well,' says Mr. James, 'and always seemed hungry for affection; so I made a little bed in the drawer of my writing-desk, and often, when I sat writing at night, I would put her to bed there. My bedroom was next to the library, and I generally left both doors open. As a rule, I was up very early, long before she was ready to awaken; but sometimes she would awake first. Then she would come fluttering and hopping into my bedroom, and talk to me in her quick, querulous little way until I put my hand down to the floor for her to jump into, in order to be lifted into the bed. There she would play hide and seek in my beard, and try to find dainty morsels in my lips—for she had long before learned to take food from me in that way—and sharply peck at my teeth when I gave her nothing. She enjoyed it immensely when I would suddenly raise my knees and make a high mountain, so she could flutter merrily down into the valley. Then I would lower my knees and make

a level plain, only to surprise and please her by creating it into a mountain again.

‘Poor, sweet, affectionate little darling! She never learned to fly. Her death was accidental and tragic, and the result of her complete and absolute confidence in me. When my daughter and I dug a tiny grave for her and lined it with the lace-like blossoms of what the children call “the bird’s nest,” we were neither of us ashamed that the tears fell fast. We covered her with the blossoms and then the earth, and there left her.’

It is human aloofness, together with the benighting influences of sacred and half-sacred traditions transmitted from generation to generation, that perpetuate to-day, in the face of a better-disposed biology, man’s illiberality toward his fellows. The art of getting into the place of others, which should be so carefully and systematically cultivated that it becomes a psychic accomplishment of every being with an imagination, is almost totally neglected.

My two guinea-pigs, to strangers, are just two small-sized rodents, no different from each other, and just like all other guinea-pigs in the world; but, in reality, they are as different from each other in their personalities as two ordinary human beings are. One of them, Cavy, is very bright, seldom requiring more than a second or third experience in order to profit by it, especially if the experience lies in the direction of her own interests or inclinations. She is self-reliant, wilful, and as vivacious as a sunbeam. She enjoys and

suffers keenly, is active and determined in providing satisfaction for her desires, and appreciates sympathy and attention more than many human youngsters.

The other one, Millie, is more indifferent in temperament, and less alive and sensible. Cavy is the leader, and Millie usually relies on her for cues as to what to do in the little emergencies of life. If Cavy thinks it would be safe to venture into a strange room where they have never been before, Millie is perfectly willing to go. If the situation seems to Cavy sufficiently grave for them to flee for their lives, it always seems that way to Millie too. In fact, Millie was so named because of her incurable confidence in and reliance on Cavy.

The first time they took their baths they were nearly scared to death. And no wonder. It was a new experience to them, altogether different from anything they had ever had before, and how could they be expected to classify it, or, rather, how could they be expected to classify it as other than something that should be avoided at all hazards—for they did classify it, of course? If they had ever seen real water before, they had never seen it used in that way. They had always been accustomed to keep themselves clean with their pretty tongues, and they did not have enough confidence in the good-will of their attendant to overcome their convictions that what they were undergoing was the beginning of the end. The poor little things struggled and snuffled

and did the best they could with the great odds there were against them to counteract the agencies which were apparently hustling them to destruction.

But now, when they take their baths, they seem to have an idea of what is going on, and will sit on the marble shelf of the wash-bowl while I wash their faces and legs and bodies with a towel without a single protest, and will even get into the bath-tub and stand in the water and be soaped and rinsed and make only occasional slight efforts to get away, unless the water happens to get into their noses or the soap into their eyes, when they will scramble up my arm in short order to get out of the tub. And they like to be muffled up in their warm towels afterwards till they are dry, just as children do. I take them out into the kitchen, where I have a couple of large Turkish towels already warm on the radiator. I spread one of these towels on the deck of the sink and put the guinea-pigs on it. Then I take the other towel, and put one end on the radiator, which stands by the sink, and extend the other out over the guinea-pigs, forming a sort of canopy-cover for them. And if you wanted to see one of the sweetest pictures of peace and contentment imaginable you should see those two happy little beings during the next hour or so. They never cheep, unless it is when I go and lift up the cover once in awhile to see how they are, when they may give out a languid note or two. They lie there and stretch themselves out in the warm, voluptuous air of their apartments, turning over

once in awhile to give variety to the experience, and to distribute the good things impartially over every part of their periphery, and seem to have absolutely no wants left. Bless their dear little souls, I enjoy it as much as they do.

Cavy doesn't like to be teased, and if she is prevented several times in succession from doing something she wants to do very much, she gets 'mulish' and won't do anything. But Millie is seldom, if ever, irritated. Cavy shows her superior organisation and memory in many ways. If she is punished for something, and one approaches her a little while afterward, she will cry, thinking she is going to be punished again. Punishment, I notice, has a varying effect on both of them, depending on the strength of the desire that is producing the offence. If the desire is weak and amounts almost to indifference, one application of a penalty is sufficient to deter them; but if the desire is very strong, like hunger, the penalty must be repeated, perhaps several times, before they have the strength to overcome the temptation. It is interesting to observe how they remember punishment, and in repeating the offence which has brought it on seem to feel that the punishment will be repeated, and yet they have not the strength to ignore the precious impulse.

One day they were on the window-sill in the sun, and there was a tomato at the opposite end of the sill from where they were. Cavy wanted some of the tomato, and went over two or three

times and began to nibble at it. Each time I had driven her away with slight, but increasing, applications of pain; but each time, after waiting a little, she had gone back again and begun to eat. The fourth time, when she got about half-way across, she suddenly stopped and half crouched down, and began to squeal or cry as if in distress. I am not sure why she did this, but it looked just as though she were perplexed by two opposite and equally strong impulses, and simply cried out in perplexity. She wanted the tomato so much, and yet she desired equally to avoid the consequences which she knew from past experience would come upon her if she took it. She may have been simply arrested by the sudden arrival of the realisation that she was about to be punished, and cried out in fear.

Cavy is easily scared. She is sensible about the ordinary sounds about her, but she can't stand having a great big biped talk loud to her and shake his fist at her. She will crouch down in a corner, with her poor little frightened eyes fastened on him, and scream like a scared child. Certain noises, I notice, fill them both with alarm. It is not loud sounds, but just certain sounds, such as that made by scraping the feet on the floor, or the escape of hissing steam from an engine. Whenever these sounds occur, they always go into a panic, running to cover, and uttering certain low warning gutturals that they never use at any other time. They have not *learned* to take alarm at these particular sounds

so far as I know. The act seems to be purely instinctive. I suppose these sounds act upon certain instincts which were built up among conditions different from those among which they now live, instincts which were of service to their ancestors in past times during their wild life on the danger-filled plains of the Orinoco, and which continue to act, although useless, because the period of domestication has not been sufficiently long for adaptation to do away with them.

I took them to-day out of doors, and let them nibble the young grass and lie in the warm spring sunshine. It was their second outing. I wish anyone who thinks guinea-pigs don't know anything and don't feel could have seen them. They were so supremely alive and happy, cropping the sweet grasses, spreading themselves out in the sun, and nosing about in little explorations here and there. They acted very differently to-day from what they did yesterday on their first trip, showing unmistakably that they remembered the day before. The first time they seemed awed by their strange surroundings, and did not begin to eat for several minutes after being turned loose, but remained crouching by the box in which I had brought them, or cowering about my legs as I sat on the grass. Every little while Cavy would stop browsing and crawl up on my lap to be cuddled, or creep around under my coat and hide.

Poor little things! I suppose it was the first time in their lives that they had ever heard the wind in the trees or seen the great blue roof of

May. I couldn't help thinking of the poor human rats of our great cities who grow up in squalid tenements, and who, on seeing for the first time the big beautiful country, stand long and look, and then, finally, overcome by the loveliness, begin to cry.

To-day, on their second visit to the grasses, the guinea-pigs began to feed almost as soon as they were put out, and seemed very happy most of the time. Occasionally their pleasures were disturbed by gusts of wind, which set the leaves shaking in a terrifying way, and once the 'scat' of an ill-mannered house-sparrow sent them scampering to their box. I have no doubt that, after a number of outings of this kind taken daily to the same place, they will come to feel perfectly free and easy and happy. And why should they not in time come to *anticipate* this daily event? They have very good memories for short periods of time, and Anticipation is a close sister of Memory. Memory calls up a past experience and Anticipation a future one.

How they do enjoy their luncheon, morning and evening, of lettuce and oats! They can hardly wait when they see me go into the pantry to bring out the well-known bundle. Before I can open it for them, here they are standing on their hind-legs and screeching and trying their best to reach it as I hold it over their heads; or, when I put it down so they can get at it, scrambling pell-mell over each other right down into the package, they are so excited and eager.

They live in a box in the kitchen. This is their head-quarters, although they are often out and ranging freely about the house. Sometimes we all go away, and they are left alone all day, or for a number of hours at a time. The first thing we hear when we open the door on our return is Cavy and Millie out in the kitchen, who have heard the key in the door-latch, and have promptly set up a howling, as if their hearts were breaking or their little stomachs hadn't had anything in them for a week.

Next to their meals, perhaps, they enjoy their evening massage more than anything else. After dinner I often take them on my lap and let them lie on their blanket, while I stroke their soft little bodies gently for a half-hour or so. They cuddle down and stretch out their dainty little feet and legs in perfect abandon, turning this way and that to get the stroking on all parts of their bodies, chuckling or grunting occasionally (to notify the operator, I suppose, of the satisfactory character of the service), and finally going off into a childlike sleep, so peaceful and sweet that I often regret to disturb them. And who shall say they do not have their guinea-pig dreams, vague and sweet, like the great beings who crucify them? If they are stroked the wrong way, especially along the back, it tickles them so, or disturbs them in some way so, they can't stand it.

As I associate day after day with these dear, bright, pretty, vivacious little souls, and observe how real their sufferings and enjoyments and

wants are, and how innocent and beautiful their lives, it makes me feel almost as if I wanted to put bombs under some of our institutions when I read that 'the principal use thus far found for guinea-pigs is as subjects for vivisection, being extensively used for this purpose, because cheap and non-resistant.'

I feel like saying over and over and over, what I have said many times before, *that we do not know the world of living, longing, suffering, enjoying life in the midst of which we have evolved.* The inhabitants of our own fields and dooryards are strangers to us. We are so little, and proud, and selfish, we never think it worth while to stop and look into their faces and get acquainted with them. It never occurs to us what a great favour it would be to them if we would actually get over into their places occasionally and realise what tragedies are constantly being enacted in their lives as a result of our insensate natures. We treat them with no consideration or respect because we have no understanding of them; and we do not understand them because we do not care anything at all about the matter. We are too busy tossing bouquets at ourselves to have much time or thought left for anybody else. We have grown up in the belief that all those who have a different shape from what we have were intended, not for life and happiness and immortality, as we were, but for death and wretchedness and chymification, and we are too dull-minded and selfish to make any change now. It is easier to be a savage than

it is to be civilised. Being civilised is hard work. It is like going uphill. It means expense, the subordination or surrender of some of our most luxurious experiences. To be a savage is to be natural, to do as we please, to enjoy mental unrestraint, to allow scope and holiday to our dearest and most valued inclinations. So we take the life of ease, the savage life, and leave civilisation to be looked after by our hardier and less fastidious descendants. Everybody else looks at things in the same way, so we all just go on acting the savage and calling our acts 'civilised,' with a sort of tacit understanding all round that every one is to do what he can to squelch the 'cranks' and maintain the integrity of our common pretence.

In the rational times to come, when men have become *really civilised*, and the darkness they now call day is displaced by real radiance, the notorious hypocrisy of this lip-virtuous age will be one of the most amazing of historic facts, and will be cited by the emancipated beings of the future as an instance of how bogus and diabolical men can be in reality, and at the same time be, according to their own standards, 'civilised.'

CHAPTER III

THE HUMAN ATTITUDE TOWARD OTHERS

MAN has defined himself as the 'paragon of creation.'

This is an overestimate. Man is no more a model animal than the universe is a model universe. They are both of them very immodel, as every one must know who has powers of understanding exceeding those of the infant.

Man is a bigot, and in his conception of himself and in his estimate of the relative importance of himself and others, he is true to the weaknesses of his kind. But, omitting altogether the question of whether man is the masterpiece of the universe or not, we may affirm with perfect confidence, and without fear of contradiction, that if man is the paragon of the universe, the universe has no cause for dry eyes.

Man's treatment of his fellow-men, and especially his conduct toward the forms of life differing anatomically from him, are such as to stamp him as being anything but an ideal animal

—anywhere outside the psychologies of brigands, at any rate.

Human beings have been sufficiently enterprising and sufficiently devoted to each other to evolve into the masters of the earth ; but instead of recognising their responsibilities and converting themselves into preceptors for the vanquished races, as an ideal race would have done, they have become the butchers of the universe. Instead of becoming the models and schoolmasters of the world in which they have outstripped, and striving to improve the faulty natures, and guide the wayward feet of those by means of whom they have been hoisted into distinction, they have become colossal pedants, proclaiming themselves the pets and specials of creation, and teaching each other that other races are mere things to furnish pasture and pastime for them. They preach that it is the ideal relation of associated beings for each to act toward the others in the way in which he himself would like to have others act toward him. This ideal of social rectitude was discovered two or three thousand years ago, and has been taught by the sages of the species ever since. But in the application of this rule human beings restrict it hypocritically to the members of their own species. No non-human is innocent enough, or is sufficiently sensitive, intelligent, or beautiful, to be exempt from the most frightful wrongs, if by these wrongs human comfort, curiosity, or pastime are in any way whatever catered to. Our own happiness, and that of our species, are assumed

to be so pre-eminent that we sacrifice without hesitancy the most sacred interests of others, in order that our own may be carefully provided for. Even for a tooth or a feather to wear on human vanity, forests are silenced and communities littered with the dead and dying. Beautiful beings that fill the groves with song and juvenility are compelled to sprawl lifeless and dishevelled on the heads of unconscionable sillies.

Look at the crimes that thousands of creatures are subjected to by teachers and 'experimentalists' of various kinds all over the world! Almost no effort is made to economise the killings, maimings, diseases, and crucifixions inflicted by scientists upon those with whom they deal. Let a biological laboratory start up in a locality, and it won't be long before the whole region round will be uninhabited, except by roving bands of half-lighted 'biologists' scouring the country with nets and poisons in search of 'specimens.'

At a recent meeting of the Biology Round Table of Chicago an incident occurred which illustrates the feeling which prevails among biologists generally toward the beings exploited by them in study and experiment. The subject under discussion was lantern projection, which consists in putting small living animals into a cell of water and projecting them on to a screen, the cell being used in the lantern like an ordinary slide. The cell is small and the creatures are soon killed by the intense heat of the lantern light. The exhibition is unsatisfactory also from the fact that the

creatures on exhibition act very abnormally while they do live. One of the members of the Round Table (Mr. C.) was explaining a device he had conceived, by means of which the projected creatures were protected from the intense heat. 'I can't help but feel some sympathy for these little fellows we burn up here,' says he. 'You must have been receiving literature from the Humane Society,' chirped another member promptly, to whom the very proper feeling of Mr. C. evidently seemed useless. This spirit of unconcern for the victims of the laboratory is, unfortunately, typical of the attitude of biologists generally; and it represented the general attitude of those present at this particular gathering, as was shown by the fact that nearly all the solicitude for the improvement of the cell was expended on the attainment of a more normal and distinct image, and on the production of a cell more mechanically complete, the welfare of those who occupied the cell being practically ignored. One member did venture the retort to the half-sneer of the second member: 'Mr. C. doesn't have to be incited by humane leaflets; he simply *thinks*.'

No one knows so well as the biologists the great facts on which rests the physiological and anatomical unity of the animal world, but to the equally potent facts underlying psychic and moral relationship they are generally as blind as bats. Biologists are specialists, and, like all other specialists, they usually know nothing of the wonderful fields of human knowledge which stretch

away on every side from their own intellectual potato patch.

One of the most soulless things I ever read of anywhere was a series of 'experiments' performed a few years ago by an Italian monster on turtles. The experimenter was trying to find out the effects of mutilations of one kind and another on turtles. One thing he did was to take a lot of these solemn and undemonstrative, but very much underestimated and really sagacious and lovable, creatures and cut off their heads. It is well known that sociologists have long racked their minds over the problem of the relative effects of decapitation on chelonians and men, and that they have felt that the ultimate destinies of mankind hinged largely on the solution of this problem; so this radiant and enterprising countryman of Columbus decided to take upon himself the task of turning the searchlight of scientific investigation on the subject. One of the turtles lived twenty-three days without its head. Then the experimenter took another lot and deprived them of their brains. He wanted to ascertain whether these humble reptiles were able to maintain the phenomena of life without brains as readily as human beings do, who are known to go through life in large numbers without anything whatever in their heads, except devilment. One of this second lot of turtles lingered on for six months before it finally died. The climax of his atrocities was meet for a fiend. He took a large turtle and cut away all the flesh from its body, cut away its limbs and viscera and lower shell,

leaving only the head, backbone, and tail and upper shell. The part left was really little more than an animated spinal column ; yet the poor bodyless thing had enough vitality left to hang on to a knife for a half-hour, and to bite off two of the fingers of the inhuman devil who was conducting the ' investigations.'

Look at the scenes to be met with in our great cities ! They are sufficient to horrify any being susceptible enough to the sufferings of others to be rated as one-fifth civilised. An army of butchers standing in blood ankle-deep and plunging great knives into writhing, shrieking living beings ; helpless swine swinging by their hinders with their blood gushing from their slashed jugulars ; unsuspecting oxen with trustful eyes looking up at the deadly pole-axe, and a moment later lying a-quiver under its relentless thud ; an atmosphere in perpetual churn with the groans and screams of the dying ; streets thronged with unprocessed funerals ; dead bodies dangling from sale-hooks or sprawling on chopping-blocks ; men and women going about praying and preaching, and sitting down two or three times a day and pouncing on the uncoffined remains of some poor creature cut down for them by the callous hands of hired cut-throats—such are the sights in all our streets and stock-yards, and such are the crimes inflicted day after day by Christian cannibals on the defenceless dumb ones of this world.

Oh this killing, killing, *killing*—this awful, never-stopping, never-ending, world-wide butchery !

What a world! 'Ideal'?—and 'perfect'?—and 'all-wise'? Certainly—to tigers, and highwaymen, and people who are sound asleep; but to everybody else it is simply *monstrous*.

We are nothing but a lot of ferocious humbugs—that is the long and the short of it—leading lives all the way from a tenth to two-thirds decent in our conduct towards our fellow-men, but almost absolutely savage in our treatment of not-men. A being who can look without weeping on the heart-rending facts that fill the cities of our so-called civilisation has a psychology granitic enough to gaze unmoved on a hellful of roasting souls.

The Chicago stock-yards alone grind up annually 4,500,000 sheep, 5,500,000 cattle, 450,000 calves, and 10,000,000 hogs—20,500,000 *living beings a year, or an average of over 100 a minute during every ten-hour working day!*

What a mill! Just think of it! You who find it hard to realise vividly, and who stand blank and unconcerned in the presence of horrors that ought to make your very viscera crawl, and the very stones at your feet rise up, just *remember*, as you go about your daily duties, wherever you are and whatever you may be doing, *that every time the clock strikes, 6,500 innocent, intelligent, and highly sensitive beings have had their heads smashed with an axe, and their throats lunged through, and have struggled, and shuddered, and seen the world vanish from their eyes, here in these godless charnels. And remember, too, that this appalling carnage goes on,*

and on, and on, day after day, month after month, and year after year.

‘What for?’ Why, bless your life! in order that men and women may pray for mercy, and preach the Golden Rule, and deplore injustice, *with their bellies full of blood!*

I would like to retain respect for the religion of my boyhood, but when I see that religion look with indifference, and even levity, upon a hemorrhage wide as the continents, and horrible even to ‘heathens’—not only wink at it, but apologise for it, and even belittle those few emancipated souls who are trying to stop it—I can but feel that such a faith has no just claims on the allegiance of thinking men. ‘Does it not shame you,’ cried ‘pagan’ Plutarch away in the dawning, ‘to mingle blood and murder with Nature’s beneficent fruits? *Other carnivora* you call savage and ferocious—lions, tigers, and serpents—yet you yourselves come behind them in no species of barbarity.’ Men and women who hold shares in the responsibility for the common crimes of our civilisation would do better to stop giving money for missionaries and begin on themselves; for they commit every day of their lives greater crimes and more of them than the so-called ‘heathens’ they are trying to ‘convert’ ever dream of. The gods pity this world if we have got to go on for ever as we have in the past—a globeful of lip-virtuous felons!

It has been claimed that man cannot be a consistent humanitarian, because it is necessary for

him to exploit others in various ways in order to provide for his own needs and desires.

This is the most common objection to the thesis of the New Ethics. It is the most common because it is the most selfish. So prominent is egoism in human psychology, and in the philosophies that have sprung from that psychology, that the most natural and convincing objections to any proposition are those prompted by and appealing to the selfish instincts. The question that arises in the mind of the ordinary man when a change in the arrangements of the world is suggested to him is not what will be the effect of the change on the universe, but what will be its effect on *him*—on that remarkable atom of the universe so zealously partitioned off from the rest by his own skin. Man has been so long accustomed to the undisputed privilege of spoliation, and has so long and so brilliantly imagined himself to be all there is in the world, that a proposition denying this privilege, however fair the proposition may be from an impartial point of view, is promptly classified as the allegation of a zany, and is supposed to be conclusively disposed of when it is shown to be capable of interfering with human convenience or pleasure.

When the problem of African slavery was under discussion in this country a generation or two ago, if the discussion had been confined to the question as to whether the emancipation of the blacks would be a good thing for the whites, and the question of the effects of the emancipation on

the blacks themselves had never been thought of at all, the discussion would have been on an intellectual par with the discussion of the question of universal emancipation when the discussion is confined to a consideration of the effects, real and fancied, on human beings alone, without anything more than the most casual consideration, if any at all, for the beings whose emancipation is under discussion.

An exhibition of this one-sided method of dealing with matters involving human interests was given right here on the earth on a grand scale only a few months ago. The human inhabitants of two or three continents fairly stood on their hind-feet and howled because it was shown that extensive insantiation existed in the great slaughtering establishments of Chicago. Men and women by the million who had all their lives up to that time dozed peacefully in the presence of evils of all kinds, both ordinary and extraordinary, became almost violent over the disclosures ; and newspapers and periodicals never before known to become hysterical over anything, except the assassination of McKinley and the local election, almost took fire from the high thermal character of their indignation. Too little care had been expended in carrying on the great killing operations centred in these establishments—too little soap and water, and an unnecessary number of dogs and working-men dropping into the great vats from which canned sweetmeats came.

Not a word was said, however, about the dele-

terious effects of these establishments on the millions of poor creatures whose lives were taken in the most cold-blooded manner. It was really *not* the *crime* that provoked the storm, but the *carelessness* of its *execution* and the *unwholesomeness* of the *proceeds* of the crime.

Does anyone suppose for a moment that this display of feeling was a creditable or intelligent display? 'Justified?' Certainly; but not very balanced. It was the indignation of egoists and children. Would really rational beings have expended their entire indignation, or even the principal part of it, on the fact that the killing act which resulted in the production of their precious porter-house was lacking in technique?

Why should we think so everlastingly of the effects of our crimes on ourselves? Why should we not lavish an occasional thought on our victims? Because we are partial instead of impartial; because we are narrow and selfish in our feelings and understanding instead of broad and altruistic; because we are a lot of fervid barbarians without any realisation of our true dimensions, and revelling in the unchallenged conceit that we are the whole thing in this world.

One would think from all this one-sided talk about the impurity and indigestibility of our victims that we were in this business of assimilation for benevolent reasons entirely; that non-human beings have really no feelings in the matter at all, or that, if they do have any feelings, these feelings are in perfect harmony with the

human scheme to convert them into tit-bits. Indeed, from the thorough manner in which the interests of these poor races are ignored, one would almost suppose that they are actually glad to give up their lives for the glory of being interred, along with their many friends and relatives and their beloved and multitudinous ancestors, in the illustrious recesses of the human maw.

We are not over-illuminated—that's one thing sure. Human altruism is in about the same stage of development as the altruism of the female, who, when her automobile ran over a tramp, bemoaned the occurrence because the accident made it necessary for her vehicle to be disinfected.

Welcome to this agitation over the untidiness of the killing establishments! It has done good. Storms are useful as well as calms. It has caused a lot of people to seek the paths of rectitude who never would have thought of doing such a thing if they had not been about scared to death, and it has enabled a lot of others to think, or to go through the motion of thinking, who are able to put forth this activity only under the most hair-raising circumstances. Maybe it will result in the final sweetening of that stench centre which has so long and so faithfully polluted the air of this city. And maybe it will lead in time to some amelioration of the terrible conditions under which the men and women and boys and girls work and live who maintain this infernal business.

But let us broaden out a little. Let us exceed the barbarian. Let us mix a little real altruism

with our feelings and judgments. *We ought to be able to discern the cries of the great sad-eyed multitudes from the prairies who pour out their innocent existences in these houses of sacrifice, as well as the salicylic acid in our sausage and the gangrene in our steak !*

Nearly every act of conduct has at least two distinct sides or aspects, depending on the point of view from which the act is inspected. If an act affects its author only, then it is to be looked at and judged from his standpoint alone. Whether it is good or bad, proper or improper, depends upon its effects, immediate and remote, which it has on him. But not many acts are of this kind : we are so closely and in so many ways related to each other. Nearly always there are, somewhere in space or time, one or more other interests that are affected by an act in addition to the author's interest, and this implies that there are one or more other points of view from which the act may be judged. Hence there may be, and in the present childish state of human judgment there generally are, very different verdicts rendered regarding the value or propriety of any particular act or event. 'There are two sides to every story,' and often a great many more than two. 'It's an ill wind that blows nobody good.' 'Joy is only our side of others' sorrows.'

These sadly beautiful lines from 'The Caged Thrush' say what I mean :

'Alas for the bird that was born to sing !

They have made him a cage ; they have clipped his wing ;

They have shut him up in a dingy street ;
And they praise his singing and call it sweet.
But his heart and his song are saddened, and filled
With the woods, and the nest he never will build ;
And the wild young dawn coming into the tree,
And the mate that never his mate will be.
So, day by day, when his notes are heard,
They sweeten the street, but—*alas for the bird !*

The beings of this world have been evolved. They have all been formed according to the same general plan, and filled with similar susceptibilities. No being or set of beings is so distinctive, or special, or so pre-eminently important, as to be entitled, according to any impartial system of ethics, to consider its own convenience and welfare to the exclusion of the convenience and welfare of every one else. The highwayman may plead in extenuation of his crimes that they are *short cuts to prosperity* which he cannot very well get along *without* ; but the wayfarer, however lowly or peculiar, would certainly have the right to reply, in any locality outside a community of highwaymen, that these things are to him *short cuts to ruin* which he cannot very well get along *with*.

Every crime almost is a good thing, looked at from the exclusive standpoint of the criminal. If it were not so, it would never be committed. But from the standpoint of the one on whom the crime falls it is likely to be a very different thing—*how* different depends on the degree of diversity of the interests involved. *The only rational method of judging conduct, and the only method that should ever be employed by beings pretending to be logical or*

civilised, is to balance the effects which the act on trial has on the different interests involved, and then render a verdict from the standpoint of this balance, which is the standpoint of the universe.

The human attitude toward the other beings of this world is an attitude which will have to undergo great change before it becomes anything like ideal from an extra-human point of view. Men are not far enough along yet in their evolution toward a proper relation to their fellow-species to even *pretend* to observe those principles of justice and right which are regarded by them as being so authoritative as standards of social relation among themselves. They inflict on all those beyond the bounds of the human all of those crimes to gain immunity from which they have themselves in every age been willing to lay down their lives.

Oh, this primitive, just-born, brutal ball! How long—oh! how long—how many suffering centuries and centuries, before the simple laws of social well-being, which men have at such expense worked out for themselves, will extend their benedictions consistently over the pain-plagued races of universal life?

If justice is such a precious and necessary thing to men, is it not reasonable to suppose that it would be highly acceptable to other like constituted beings? One of the peculiarities that has always characterised men's pursuit of justice has been the ferocity with which each class of human beings have contended that things should be levelled down as far as themselves, and the corre-

sponding complacency with which they have allowed the process to stop there. Our fortitude in enduring misery is never so great, never so triumphant and serene, never rises to those supreme heights where the soul seems to assume complete sovereignty over sense, *as when that misery falls on others.*

CHAPTER IV

OUR FOUR-FOOTED SLAVES

MAN is a comparatively feeble animal. He is not very large, in the first place—a mere infant, in fact, compared with the giants of the animal kingdom. Then, he stands on a very narrow and insecure base—‘at most for the flattest-soled of some half a square foot.’

Hands have come high. They have been acquired at the expense of a firm foundation. In the perpendicularisation of the vertebrate, in the rearing of it upon its hind-limbs in order to emancipate its fore-limbs for purposes of prehension, the priceless leverage of the quadruped has been lost. Pushing and pulling are the two most important operations of human industry, and man can do neither of them.

If the original vertebrates (fishes) had been sextipeds instead of quadrupeds—had had three pairs of limbs instead of two—things would have been very different in this world from what they are. An additional pair of limbs would have

changed profoundly the form and fate of all the backboned phylum of beings. Hands, which have been such brilliant aids to man in his struggle for supremacy over the rest of Nature, would have appeared much earlier in the course of evolution than they actually did appear, because of the ease with which one pair of limbs could have been relieved from the duties of locomotion where there were two pairs left; and the form of organism which was finally and for ever to dominate the earth (the centaurial) would have been far superior in looks and efficiency to the stilted, straddling, up-ended back-wearies into whose hands the planet has actually fallen.

The great and far-reaching changes which man has made in the world have been wrought by energies drawn chiefly from sources outside of himself. Man has directed more than he has actually done things. Civilisation is the result, not of human strength, but of human sagacity. Man has harnessed the herds that roamed about him, and forced them to groan for him, and the winds and waves he has made into menials.

A large part of the energy of civilisation has been furnished, and is still furnished, by the great four-footed races. Civilisation may almost be said to have been borne from the beginning down to comparatively recent times on the powerful and patient backs of the horse, the ox, the mule, the elephant, the camel, the reindeer, the water-buffalo, the yak, the donkey, and the dog. The

superior strength and mobility of these races, directed by the superior intelligence of man, have enabled man to perform tasks and carry out enterprises he never could have dreamed of undertaking single-handed. Without horses or other individuals able and willing to wield the great implements, agriculture, the most basic of human industries, would be limited to the very simple operations of primitive peoples. Where man now tills acres he could, unaided, scarce cultivate ares.)

The invention of the steam-engine and its appendage, the electric motor, has increased enormously the energies in man's possession. But these inventions, while they have added to human efficiency, have, on the whole, scarcely diminished, if they have not actually increased, the demand for the power-producing mammals.

It has been said that one of the reasons why there never arose and never could have arisen any great civilisation in the Western Hemisphere prior to the coming of Europeans was because there lived here no great quadruped races whose energies the aborigines could seize upon and exploit. The llama and the dog were the only domestic animals of the Indians, and neither of these was strong enough to be of much use in agriculture. The bison was here, and was the only mammal of temperate or tropical America large enough to generate energies sufficient to assist in tilling the soil; but psychologically the bison was unfitted for a domestic. The horse was

also originally a native of North America, but probably perished from the continent before the appearance of man. There were no horses in America when the Caucasians took possession of the continent.

Whether the absence of a higher civilisation in America was or was not due to any extent to the absence of animals fitted for domestication, we do not know positively; but we do know that the growth of human industry and civilisation would have been very much slower and more difficult if human enterprises had not in every age of the world had behind and beneath them the powerful shoulders of the ungulate.

But that which is of particular importance here is the fact that these races associated with man are not treated by him with a consideration at all commensurate with the services they perform. He must have a hard heart or a strange understanding who can look upon the lot of man's menials and not feel that wrongs — not petty wrongs, but cruel, irreparable wrongs, wrongs that would darken the darkest pages of human history—are unmercifully rained upon them. The horse, the mule, the camel, the donkey, the elephant, and the ox have pretty nearly made man what he is. They have contributed and continue to contribute to human enjoyment and civilisation to an extent that can never be estimated. In return for all this they are, as a rule, regularly and systematically *robbed*. Their lives

are drained of everything that makes life worth living, and into them are poured instead all the anguish of prolonged crucifixion. They are overloaded and overworked, poorly sheltered, beaten without cause, neglected, insulted, starved, maimed, misunderstood, deprived of leisure and liberty, and doomed to a round of wretchedness and toil such as only machines, with no desire for happiness and no capacity for despair, would ever voluntarily enter upon. No wonder the fire soon dies out of their faces; no wonder their forms become wilted and apathetic; no wonder their comely countenances grow drawn and leathery, and out of their eyes streams the stolid solemnity that darkens the faces of the doomed.

Man looks upon and treats those co-operating with him in the labour of life as mere means to his own selfish ends. What little he allows to them he allows, not freely, as a grateful beneficiary would allow it, but grudgingly, and in a spirit of pure selfishness. Man feeds and houses those who help him, not because he wants to make them comfortable and happy, or because he wishes them to receive an equitable reward for their services. Not at all. He is not that kind of an animal. What man does he does primarily for himself, and for no one else. If it were necessary for him to pay more in order to have the services of those who work for him, he would, I presume, pay the additional price rather than do without these services. But if there were any way in

which he could obtain from non-human races all the benefits he obtains from them to-day without giving them anything whatever in return, the facts justify the conclusion that he would be perfectly willing to do so, even though it were at the cost of infinite pain and sacrifice to them. This is a pretty hard thing to say about one who advertises himself as the 'paragon of creation.' But the human race is so addicted to the diabolical, so prone to the performance of deeds that are enough to make any man, with a single lobe of thinking matter and a heart as big as a pea, feel ashamed of his species, that this seems to be a perfectly justifiable indictment. As a matter of fact, man is doing this very thing now wherever he is able to do so. He takes from those around him anything they have that will be, or that he imagines will be, of any benefit whatever to him, and he takes it always with the least inconvenience to himself, and with almost an infernal indifference to the sacrifices it entails on those whom he levies upon.

Man feeds and shelters those who aid and serve him for the same reason that the capitalist feeds and shelters the human slaves who aid and serve him, which is the same reason precisely that impels the farmer to protect his machines, simply to make them more effective and lasting. They are all to him mere implements—things to be squeezed, like lemons—nothing more. When they are no longer able to serve him, when he has extracted from them every benefit he is able

to extract, he casts them out, as the employer does his worn-out workmen, to *starve* and *rot*. The stars of heaven never look down on more pitiful sights than that of horses or men, after having drudged faithfully all their days in the service of their lords, and after having received for their lifelong devotion and slavery a compensation chiefly of pain, cast out in their helpless old age to starve.

One would suppose that man, when he beholds the wrecks he has completed and realises that he is the sole author of them, would be filled with sorrow and remorse. But he is not. He is too fervid a ruffian. His highest deliverance, as he turns the battered ruins of his victims toward the 'bone-yard,' is likely to be a jest, and his keenest regret is, not that they have suffered, or that they are ruined, but that now, since they are no longer able to work for him, they are unfit for first-class leather. The utter lack of parity between the services and sacrifices which the menials of men are compelled to render and undergo, and the pittance which they receive in return, is in this world matched only by the hellish injustices heaped by inhuman capitalists upon those who serve them.

It is not necessary that the relations existing between human and associated species shall cease in order that conditions may be made to conform to humanitarian ideals, any more than it is necessary that all relations between the capitalist and the labourer shall come to an end in order that

industrial conditions among men may be idealised. It is not even necessary that this relation be less profitable to man—merely that it be made more acceptable to all concerned, made to be *two-sided* instead of *one-sided*, made to harmonise with a sane and enlightened sense of *justice*. We preach so much about justice and humanity, and apparently think so much of these sentiments. I presume it would make a library in size something like that which the fanatical Omar fed to the flames at the mouth of the Nile in the early days of Saracenic aggression, if all the complimentary things men say and write every year about justice and humanity were made into books and gathered together in one place. Now, it is simply insisted that we should not allow these noble promptings of ours to go to waste in the more or less useless phenomena of verbalisation, but should put into actual operation in our dealings with those toward whom we are under the greatest obligations, both human and non-human, the exalted virtues we are all the time admiring, and about which we are all the time talking.

This is the ideal:

Man takes these races from the plains and jungles where they are exposed to hunger and thirst and cold, harassed by enemies, and victimised by their own child-like intelligence. He associates them with himself. He gives to them security, regular food, shelter, intellectual surroundings, and a home. They give to him in return the benefits of their superior strength and

speed, bearing man and his burdens, manipulating for him his great machines, and supplementing in a thousand ways the inadequate energies of their mentor. These beings, these wards of man, are really children — great, big, strong, healthy, energetic boys and girls—capable of an incredible amount of work and of genuine fellowship and affection, but much better off associated with some one who will look after them and afford to them for the emergencies of life a higher degree of wisdom and generalisation than they possess. Man gives to them the advantage of his judgment and enterprise in exchange for power, endurance, and mobility. Both are benefited; both are better off than they would be if they acted independently or were alone in the world. Each contributes to the fullest life and highest development of the other. The resulting advantage arises in the same way exactly as that which arises when men divide their labours among themselves and co-operate with each other in their tasks. Man, in the ideal state, treats the races affiliated with him, not as objects of pillage, but as beings with rights and feelings and capabilities of happiness and misery like himself. He is kind to them, and ever mindful of how he may gladden and enrich their necessarily monotonous lives. He gets real pleasure, as every true altruist must, out of the simple fact of seeing them happy, and of realising that he has in some measure contributed to that happiness. He provides them plenty to eat, com-

fortable dwellings, vacation days in which to rest, opportunities for pleasure and pastime, an education, a home, and infirmaries for times of misfortune and decline. He does not overload them or drive them until they are ready to drop. He does not mistreat them until they are so soured that they have to be muzzled to keep them from snapping at passers-by. He does not cut off their pretty tails, nor rein up their heads into horrible positions in the interests of an illiterate vanity. He does not go around with a stick or a whip with which to attack them whenever he does not feel well, or when things go wrong in his own household. He talks to them. He treats them as the Arab treats his horse. The Arab never uses a whip on his steed. He treats him always as his comrade, as one whom he delights to please, taking him into his own tent if necessary, and putting his arms around his neck, and looking into his beautiful eyes the love and assurance of *fellowship*. In short, man, when he acts ideally, treats these beings at all times as *associates*, *not* as *slaves* or *machines*—as his best friends and his most faithful and valuable allies. They, on the other hand, come to recognise man as their true guide and benefactor. They learn to trust and love him, and the great generous-hearted creatures are willing to wear out their very skeletons in his service.

This is the ideal. This is Reciprocity, *which is the only legitimate relation to exist among associated beings of any kind*. It is the avoiding of that which

we do not like when done to ourselves. It is simple *justice*. It is the only conduct that can characterise a race that has any right whatever to imagine itself civilised. Four-footed people, like bipeds, are not less serviceable, they are more so, as *somebodies* than as *things*.

(Oh, men! you who are struggling and longing for that which is denied you and that which belongs to you—the right to live, to be free, and to enjoy your legitimate share of the only world you have access to—will you not open your hearts to this plea—this plea for beings whose lot, like yours, is a bitter one, and whose miseries spring from the same cruel sources as your own miseries? You know what it is to be despoiled, to be stung by cruel overlings, to be misunderstood, to tug and sweat day after day until your poor goaded bodies are ready to drop from weariness. You know what it means to be bossed and held up and walked on, to be insulted and despised by the very beings who rob you, to have the last drops wrung from your ravished lives by the brutal hands of pompous usurpers. Will you be indifferent to granting to others those blessings which you know from your own sad and empty existences are all that make life really worth living? Shake off your own chains! Be free! Take your inalienable rights! Is this not *your* world as much as anybody's? Be *men*, not doormats! Light the red hell of revolution, if need be! For what is life if it is but the accursed privilege of wearing yourselves out in the service of cannibals,

of man-eating millionaires, of monsters who eat you up alive, you and your wives and children? But *don't* forget to grant to your poor broken co-sufferers in harness the same blessed measure you claim for yourselves.)

CHAPTER V

THE COST OF A SKIN

(FURS are *luxuries*, and it cannot be said in apology for the wrongs done in obtaining them that they are essential to human life. They are no more essential to human welfare than tooth-picks or diamonds. Doing without them may cause inconvenience sometimes, but it cannot cause anything worse; and inconvenience, especially if it is largely imaginary, is a form of distress not extreme enough to cause any civilised being to commit crimes in order to avoid it. There are a great many inconveniences in this inconvenient world. It is inconvenient to do without our neighbour's purse sometimes, and our neighbour's wife and wits, much more inconvenient than being deprived of the death-harvest of the birds and quadrupeds. It is also inconvenient—very inconvenient—to see the golden apples of pleasure and opportunity shining in profusion all about us, even rotting in the very hands of multitudes who know not what they are,

and feel our own souls famishing—always famishing—for even the parings of life's fruitions.

(But the most of us are able to stand these greater inconveniences, either because we are educated to do so or because we don't like to get mixed up with the club of public opinion and law. The time will come in the evolution of human sympathy and understanding when the same kindly club will hang over the birds and quadrupeds that hangs over our neighbour now.) Then we shall refrain from burglarising them, no doubt, with the same prescribed cheerfulness as that with which we keep our hands off our neighbour now. In the present raw state of human nature the only limit most men place to their wrongdoing is that indicated by where punishment begins.

(Skins and deceased birds are not half so beautiful, anyway, as flowers, or ribbons, or velvets, or mohair. They are popular because they are barbaric. They appeal to the vulgarian. They have no attractions whatever for men and women of culture and education. Our ideas of art, like our impulses, and like human psychology generally, are still largely in the savage stage of evolution. No one but a vulgarian would attempt to adorn herself by putting the dead bodies of birds on her head, or muffling her shoulders in grinning weasels and dangling mink-tails.) Indeed, to one who sees things as they are, in the full light of adult understanding, a woman rigged out in such cemeterial appurtenances is repulsive. She is a concourse of unnecessary funerals. She is about

as fascinating, about as choice and ingenious in her decorations, as she would be embellished in a necklace of human scalps. She excites pity. She is a pathetic example of a being trying to add to her charms by high crimes and misdemeanours, and succeeding only in advertising her inhumanity.

It is estimated that 30,000,000 living beings are annually put to death in this world for their furs alone (3). If all of these millions could be gathered together in one place, they would make, with their broken and outraged bodies, their sunken eyes and frozen faces, a mountain of death that would terrify even the mindless savages in whose interests and at whose behest this frightful destruction is wrought.

But the full meaning of this appalling massacre is not conveyed by offhand totals from the catalogue of death, but by a contemplation of the enormous sufferings inseparably connected with it. Of all the accessories gathered from every quarter of the globe to garnish human vanity, furs are the most expensive, for in no way does man show such complete indifference to the feelings of his victims as he does in the fur trade. Fur-bearing animals, many of them, are intelligent enough to require the exercise by man of his highest cunning and perfidy to effect their capture. Yet, in addition to death, they are compelled to undergo sufferings so inhuman as to be utterly unjustified, even though the proceeds of these sacrifices were masses of living gold instead of

skin. I read the other day of an otter that was pursued by a band of men and boys for four hours, when she gave birth to two little ones, and the account stated that she was pursued for two hours after that before she was finally killed.

Most of the skins used for furs are obtained by catching their owners in traps, and death in such cases comes usually at the close of hours or even of days of the most intense suffering and terror. The principal device used by professional trappers is the steel trap, the most fiendish instrument of arrest that was ever invented by the human mind. It is not an uncommon thing for the savage jaws of this monstrous instrument to bite off the leg of their would-be captive at a single stroke. If the leg is not completely amputated by the snap of the terrible steel, it is likely to be so deeply cut as to encourage the animal to gnaw or twist it off. This latter is the common mode of escape of many animals. Trappers say that on an average one animal out of every five caught *has only three legs*. A trapper told me recently that he once caught a musk-rat that *had only one leg*. The poor remnant was caught by the tail.

(Suppose we human beings were hunted with traps by a race of giants 100 feet high, very ingenious, and absolutely without conscience so far as their treatment of us was concerned. Suppose that, in spite of all our vigilance, we were continually falling into these traps, which were hidden all about us, and compelled in order to

escape to eat off our own arms or legs. Suppose that even then one out of every five of us was so ill-starred as to be caught a second time, and ended up, after hours or days of unspeakable agony, by having his head smashed into a jelly by a big club.) Suppose we were absolutely helpless in the matter, and that our victimisers had no higher purpose in inflicting these fiendish outrages than to get a scalp or a jawbone to dangle about their demoniacal necks. Suppose, finally, in order to complete the analogy, that these people imagined themselves to be highly civilised and enlightened. What sort of an opinion do you think *we* would have in the course of ages as to the real character of these people and of their fitness to be the models and superintendents of a planet?

In order to guard against the escape of the captive by the amputation of its own limb, trappers are advised by their guide-books to use traps with small 'pans,' so that the limb of the captive, coming directly in the centre of the trap, will be clutched close up to the body. No amount of self-mastication then can free the unfortunate; it is doomed. It may gnaw its fettered foot, and, in the frenzy of its agony, break its teeth on the unyielding steel, but it can never get away.

The 'spring-pole' is another device used by trappers to prevent the escape of their prey by self-mutilation, and at the same time ensure it from destruction by other passing animals. This consists of a flexible pole set in the ground near

the trap. The upper end of the pole is bent down and fastened in such a way as to be liberated by any slight wrench. The chain of the trap is fastened to the pole; and when the creature is caught, its struggles to escape, which, we are told, 'are often so violent as to break a stout trap or chain,' release the pole, and the trap and prisoner are jerked into the air and held there. Here the unhappy captive must hang until it starves to death, or freezes, or perishes from thirst or pain, or until the particular 'paragon' who carries on this accursed business comes along and confers on it the favour of knocking out its brains. The poor creature may have to hang in this distressing condition for a day or two, or even a week, suffering agonies no pen can describe, including the pains of inflammation, rendered many times more excruciating by the thousand fruitless struggles of the distracted sufferer to escape.)

The 'sliding-pole' is an arrangement for causing captives to drown themselves, and the 'dead-fall' is a baited log so adjusted as to fall and crush the life out of any being unwary enough to approach for the proffered food.

But of all the cruel methods used by trappers in getting possession of their prey, the one sometimes employed in catching the ermine is perhaps the climax of them all. The method is used in order to avoid the injury to the skin which is caused by catching the animal in a trap. The method consists in taking pieces of iron too large for the ermine to drag away with it, and coating them

with grease, and then putting these objects where the ermine will find them. The ermine licks at the grease, and the intense cold of the iron causes the tongue to instantly freeze fast, as if it had been put into a vise. There is no possibility of escape, except by pulling the tongue out by the roots. The inevitable struggles to escape cause a larger and larger area to become adherent to the pitiless iron, and in time the whole mouth region may become solidified from the prolonged exposures in the bitter Arctic cold.

(No pen can *ever* portray and no mind can *ever* realise what these poor unconsidered victims of human vanity endure during their long hours and days of awful crucifixion up there among the silences of the great white North.)

Human industry is not a fixed something—something God-ordained, like monogamy. There *are*, of course, a great many things in human affairs that are *not changeable*, that remain unaltered and unalterable from generation to generation, that could not be changed even if something else were thought of that were a great deal better. They are *sacred*. They wear a halo. They have come so far, and carry on their sainted forms such a thick layer of the beloved dust of antiquity that they are exempt from the vulgar tinkering of ameliorators. There are a lot of them lying around loose. They are the keepsakes of the race. They were presented to us by our devoted ancestors. And it looks as though we would have to wiggle along with them somehow for ever, for they are so old

and hallowed and have come so far. They are so accustomed to being let alone, and are so exceedingly holy, that if we should get to monkeying with them they are liable to go to pieces, or we, in our well-meaning blunderings to bring them up to date, might accidentally knock off some of the blessed dust which they have carried so far and which it has taken them so long to collect.

(Human industry is changing and elastic, and nothing illustrates this fact better than the evolution of human raiment. Man originally in the temperate parts of the earth wrapped himself entirely in the skins of his victims—not only clothed himself in animal products, but made his weapons and dwellings largely of materials from the same source. But with the advance of art and civilisation the less economical animal products have been steadily superseded by products from the vegetal world. The hands and feet are now about the only parts left among the more advanced races that are regularly wrapped in skins. Cotton is to-day by far the most important textile used by mankind, and wool is next. And we may expect that this sartorial reform, already so far advanced, will go on, and that the more enlightened generations of the future, for both moral and economic reasons, will clothe themselves entirely in fabrics of bloodless origin.)

Furs just as warm and beautiful as murderous sealskin may be made of plush; and vegetal silk as fine and lustrous as ever was spun by the oak-eating babes of Polyphemus can be made of wood.

Vegetal leather has been manufactured in London with the polish and durability of calfskin. And when the demand becomes strong enough to turn human attention profitably to the task, foot-wear just as comely and lasting, and more sanitary and comfortable, will be made at even less cost from plant products.)

I do hope to live to see the time when the human feet will be emancipated from their present pitiable conditions. It is hard to think of anything much more obsolete and barbaric, much less adapted to health, comfort, and delicacy, than the abominable coffins in which these industrious extremities are at present compelled to cultivate their callosities and carry on their remarkable putrefactions. The feet are naturally organs of great suppleness and beauty. Among our ancestors they are almost like hands. But they have been abused and denaturalised—cramped and humiliated, and despised, and deprived of air, exercise, and education—until they have become little more than a couple of clammy, diseased, kopje-covered, God-forsaken paralytics.

Leather is a by-product. It is an incidental arising from the prosecution of our meat-getting depredations. And it *must* be *used*. Business, that god of modern madmen, demands it. Porter-house would go to the sky, and we couldn't pile up the millionaires the way we do, if we didn't utilise everything but the dying cries of our victims.

Man is a savage. He has always carried on his activities on the assumption that there was nobody

else in the world to be considered. (He has hitherto regarded it necessary to slaughter fresh victims every time he wanted new supplies of raw material for his industries.) But there is no reason why, with no more resources than he now has, but with more feeling, he should not do otherwise if he wants to. All he needs to do is to exercise his head and heart a little more, and his butcher-knife less.) If, instead of going out with trap and gun every time he wants a trinket or a meal, man would make up his mind to avoid these methods, and would use his incomparable powers of invention to provide substitutes, there would be no necessity for him to be, what he really is now, the ringleader of beasts.

(Furs are luxuries. They are neither necessary nor artistic. They come to us red with blood and black with incalculable atrocity. Everybody *knows* that they don't grow on trees, that they are the proceeds of crimes the most frightful that earth-ones are ever compelled to suffer. And the astonishing thing about this whole business is that there are still, after so many centuries of evolution, human beings who can appear on the streets in broad daylight decked out in these monstrous proceeds and look civilised men and women in the face.

CHAPTER VI

WHAT SHALL WE EAT?

It has been said that the New Ethics is impracticable, because it is necessary for man to use other beings for nutritive purposes in order to maintain his own existence.)

Discussing this subject is a good deal like butting one's head against a stone wall—the chief effects take place in the one who carries on the activity. There is no subject of equal importance concerning which men are more misinformed, and on which, at the same time, they are more unanimously willing to remain misinformed, than the subject of human diet. The human mind is credited with curiosity. It wants to find out things. It delves into the earth, picks the rocks to pieces, sails unknown seas, analyses the starlight, and pokes about among the spaces in search of suns that are so far away they might have been wiped out of existence in the days of Cæsar and we wouldn't know it yet. (But here is a question, the question of what men shall eat,) which affects

directly or indirectly the lives and happiness of a whole planetful of inhabitants (and the only bunch of sentients in the universe whose existence we are sure of); and yet human beings in general have about as much anxiety to get at the heart of it and really understand it as they have to familiarise themselves with the roving probabilities of the Schiaparellian scratches on Mars.

It is natural for men to assume the necessity of that to which they have long been accustomed, it matters not how baseless the assumption may be. The history of every error that has ever been expelled from the human mind confirms this truth.

(But the belief that the bodies of other beings take a necessary part in human alimentation is more than a tradition: it is a convenience. For if human beings can hold on to the feeling that the flesh and blood of their fellows are in some way necessary to them, they are comparatively immune from those disturbances which the most cowed conscience is at times disposed to stir up.)

What *are* foods?—or, rather, what are *animal* foods? For animals feed on very different things from what plants do.

(Animal foods are substances able to enter into the essential composition of the bodies of animals. Animal life is a process of waste and repair. Foods, broadly, are the matters of organic supply, including oxygen, water, and minerals.)

In a stricter sense, foods are *fuels*—substances which are capable of entering into the composition of the bodies of animals and there being oxidised—substances containing carbon, hydrogen, or other elements, with an unsatisfied affinity for oxygen—substances that will burn, and in burning yield heat and energy.

The chief fuel foods of animals are *starch, sugar, fat, protein, and cellulose*. Starch, sugar, fat, and cellulose are each composed of three chemical elements (carbon, hydrogen, and oxygen), and are called *carbonaceous, or non-nitrogenous*, foods. Proteins are the *nitrogenous* foods. They contain nitrogen in addition to the three elements composing the carbonaceous foods. Cellulose is an important ingredient of the woody part of plants. It has the same chemical composition as starch ($C_6H_{10}O_5$), and is digested by a good many animals, notably the ruminants. But it is incapable of dissolution by the chemicals of the human alimentary. The goat eats old rags and waste papers, not for pastime, as wags would have it, but for the cellulose they contain. Cellulose may be digested artificially by means of sulphuric acid, and changed into grape-sugar.

The carbonaceous foods are the chief supporters of animal combustion, and the principal sources of animal heat and energy. The nitrogenous foods are primarily flesh-formers. They supply the deficits of muscular wear and tear. It used to be thought that the proteins were the true force-producers. It was supposed that muscle itself was

actually consumed in the production of energy. Liebig invented this theory, and, although the theory has long been abandoned by physiologists as false, it still finds lodgment in out-of-date minds and localities. It is now known that the regular heat-giving and force-producing foods are the carbohydrates and fats, and that proteins perform this function only incidentally, or in the absence of the regular heat- and force-producers.

The proof of this is simple. The waste products of the combustion of the carbonaceous foods—that is, the substances into which they split up when oxidised—are carbon dioxide and water, and the chief product of burned protein is urea. Repeated experiments have been made on man and other animals, and it has been found that increase of work invariably causes in the waste products an increase of carbon dioxide and water, not of urea. Increased expenditure of energy always causes increased breathing, not only to meet the demand for more oxygen, but to get rid of the accumulated carbon dioxide.

An ordinary man is said by physiologists to need in twenty-four hours an average of something like 4 ounces of protein, 2 ounces of fats, and 17 or 18 ounces of carbohydrates—about 23 or 24 ounces in all. The estimates given by different authorities vary considerably, the foregoing being the average of the standards fixed by Munk, Wolff, Voit, Rubner, Playfair, Moleschott, and Atwater.

The recent remarkable experiments of Professor Chittenden, of Yale, on himself and other members of the faculty of the University and on a squad of students and a detail of United States volunteers, go to show that the human body generates its maximum energy when fed on an amount of food hitherto supposed by physiologists to be entirely inadequate, and that the required amount of protein especially has been much exaggerated. Professor Chittenden's experiments extended over a period of from six months to a year, and were conducted with all the facilities for the exclusion of error to be found in a scientific laboratory. In his summary of the results of his experiments he says:

‘It is quite evident from a study of the results obtained that young, vigorous men of the type under observation, trained in athletics, accustomed to doing vigorous muscular work, can satisfy all the true physiological needs of their bodies, and maintain their physical strength and vigour, as well as their capacity for mental work, with an amount of proteid food equal to one-half or one-third that ordinarily consumed by men of this stamp.) All these men reduced their rate of proteid metabolism in such a degree that the amount of nitrogen excreted daily during the period of experiment implied a metabolism of about 55 grammes (about 2 ounces) of proteid matter per day. In other words, these athletes were able to reduce their nitrogenous metabolism to as low a level as many of the men of the professional

group and of the soldier group, and this with not only maintenance of health and strength, but a decided increase in muscular power. There is obviously no physiological ground for the use of such a quantity of proteid food or of total nutrients as the prevalent dietary standard calls for ' (4).

(As a matter of fact, the amount of food needed varies very much with individuals, and in the same individual at different times. Fat persons often live on a very meagre diet, while the lean eat inordinately.) The relative proportion of the different kinds of food required also varies in different individuals, and in the same individual at different times, recent investigations indicating that the body is able to adjust itself much more than was formerly supposed to deviations from a normal dietary.

It is well to understand the subject of foods and the processes of organic nutrition, and to eat with intelligence. The widespread ignorance on these matters among the masses of men is no doubt the cause of immense wretchedness to the human world. But there are a good many people who, I am confident, expend on their eating a great deal more concern than they need to. They make a fad of it. It is their specialty. They always eat in the greatest alarm for fear they will not eat or will not avoid eating just what they should eat or avoid, or will not take just the amount of this or that kind of food that is prescribed in the dietaries. Those long addicted to

diseases of the digestive organs are especially given to this form of extreme.

The natural instincts are often better guides to the needs of the tissues than the intelligence. Every one who has studied his own appetites must have noticed how they turn this way and that, from one food to another, in response to the varying demands of the body, calling for sweets when these have been for some time neglected, and for proteins or fats when these have been lacking; and how they change from season to season, choosing the cooling fruits in spring and summer and the heat-producing fats and carbohydrates in winter.

How many millions of human beings and how many billions of other beings there are that live their whole lives long in utter ignorance of the fact that there are such things as proteins and fats and sugars and starches in the world, and of the further fact that they must have just so many calory values of each one every day or they will straightway expire. And these millions and billions of beings seem to wiggle along about as well, as far as their alimentary department is concerned, as those over-specialised hobby-riders, who feed on per cents. and according to mathematical formulæ, and are always in mortal fear that they will not strike the precious balance of the calories. I do not wish to disparage scientific eating, but I think we may safely refrain from going to seed on the subject.

In this connexion it may be well to mention

the recent experiment of Professor Irving Fisher, of Yale, on a group of nine students. The students who took part in the experiment made no change in their occupation or habits, and ate whatever they relished and in the amounts they desired. Two things were emphasised: First, eating as nearly as possible just what the appetite called for; and, secondly, thorough mastication. The experiment lasted five months. At the end of the experiment it was found by measured tests in the gymnasium that the men were able to put forth on an average 100 per cent. more energy than at the beginning. It was found also that by this manner of eating the students gradually lost their desire for flesh foods, and came to prefer cereals, fruits, and nuts. At the close of the experiment, entirely as a matter of individual preference, they had reduced the consumption of meat to one-sixth of what it was at the beginning. (According to Professor Fisher, 'the practical conclusion from these experiments is that it is in the power of a healthy individual to double his endurance in five months by thorough mastication, prolonging the enjoyment of food, and acquiring a more sensitive choice of amounts and kinds to meet the varying daily needs of the body.')

(The natural appetites are the call of the tissues. Under all ordinary circumstances they should be obeyed. The appetites may oftentimes be more reliable guides to right action than the reason even. Mind, now, I am speaking of the *natural*

appetites, which have been implanted in men and other sentient beings by the Law of Selection, *not* those vicious and artificial cravings which are everywhere driving men to crime and self-destruction. Thorough mastication pays in many ways. It encourages moderation. It exercises the teeth. It saves labour to the digestive organs, which in human beings are generally much fagged from overwork and abuse. It educates the appetite, and, by enabling the digestive department to do its work with more thoroughness and dispatch, leads to economy in the alimentary supply. It promotes neatness and efficiency by minimising waste, and the consequent corruption and weakness which the presence of waste in the body tends to produce.

We eat too much—I am sure of that—and bathe too little, and eat foods that are too satanically concocted, and associate too little with our food when we eat it, and are too unconcerned about fresh air and exercise. We ought to eat less, and get out of doors more, and sleep in the starlight, and take brisk walks along dewy lanes as the sun comes up in splendour out of the eastern hills. We need to be more simple and natural in our tastes, more leisurely and idealistic, less money-hungry and idiotic, more in love with the blue sky and the wilds, more considerate of others, and more temperate in our concern for ourselves. We ought to be so fond of fresh air that we not only breathed it but ate it; so vivid and whole-souled that whole-wheat bread—just plain bread

without butter—were ambrosial to us; and so willing to move along, so vivacious and free, that it were a positive luxury for us to turn over a new leaf.

Now, what are the *sources* of the food substances needed by man? or, from what sources *may* they be obtained?

(Starch and sugar are plant products entirely, excepting the small amount of sugar in sweet milk. They are not found in flesh foods at all, or, at least, to an extent worth considering from the standpoint of food values.) Starch exists plentifully in all cereals, like rice, rye, buckwheat, Indian corn, and wheat. Chestnuts and chinkapins are rich in starch, but these are the only nuts that are. Starch occurs also in most leaves and stems, in beans and peas, and in many succulent fruits.) Every leaf is a starch factory. The so-called starch factories of men are not really factories at all, but refineries. They do not *make* starch; they simply separate it from the substances with which it naturally associates. Starch can be manufactured only by the green and growing plant. (The potato is one of the most acceptable sources of starch.) This splendid tuber, which is an American, and which was not known to the world at large before the coming of Columbus, is one of the most important foods of the human race. It is cheap, wholesome, and delicious, and now enters largely into the dietaries of all the important peoples of the earth. We may well wonder, we who are so fond of it, how the world

ever got along before the great Genoan discovered the potato. The sweet potato is superior to the white potato in nutritive value. Sago, arrowroot, corn-starch, and tapioca are refined products consisting of almost pure starch.

The chief sources of sugar are the sugar-cane (a grass growing in most sub-tropical regions of the earth), the sugar-beet, sugar-maple, sorghum, palms of various kinds, and all sweet fruits. Dates, figs, and raisins contain from 70 to 75 per cent. of sugar. Honey is a delicious sugar gathered for ungrateful man by the honey-bee from the flowers. There is also considerable sweetness in meadows and prairies. The breath of the flowers is not more fragrant than the vapoury nectar of new-mown hay. Sugar is now extensively manufactured from paper, cotton, linen rags, and wood by the action of sulphuric acid on cellulose.

Fat is found in the adipose tissues of animals; in cream, butter, and cheese; in all nuts, and in nut preparations, such as protose, nuttose, nut-butter, etc.; in cereals such as wheat, oats, barley, and Indian corn; in eggs, seeds, olives, and oils. Nuts, such as the almond, beech-nut, filbert, pecan, pine-nut, walnut, hickory-nut, cocoa-nut, and Brazil-nut, contain from 25 to 50 per cent. of fat; cheese contains 35 per cent.; chocolate 48 per cent.; butter 87 per cent.; and oils 100 per cent. The pea-nut, which is not a nut, but a legume, is also a fat food. The refined oil of the cotton-seed is an excellent culinary oil, this oil and

butter taking the place of animal extracts in the cuisines of the dietetically civilised. Cottolene is a compound of cotton-seed oil and suet. Fat chemically is a relative of starch and sugar, and the human body is able to add to its supply of fat obtained as fat in food by changing these carbohydrates into fat. The negroes of the South are said to get fat always in sugar-making time.

(The following foods are rich in protein: The muscles of animals, wheat, buckwheat, oatmeal, nuts of all kinds (especially almonds, beech-nuts, pine-nuts, and pistachios), eggs and cheese, and especially beans, peas, pea-nuts, and lentils.) There is an almost endless variety of whole-wheat breads, gluten biscuits, and breakfast foods that may be classed as protein foods. The foods of this kind prepared by the Battle Creek (Michigan) Sanitarium are especially fine.

It is in the supply of protein that flesh foods are vulgarly supposed to be rather exclusive. But there are vegetables, nuts, and grains that not only equal but far exceed chops and steaks in protein richness. Fish and poultry contain 13 per cent. by weight of protein, pork and mutton 14 per cent., bacon 8, oysters 6, and beef from 14 to 18 per cent.; while wheat has 13 per cent., oatmeal from 14 to 16 per cent., rye and buckwheat 15, nuts from 8 to 25, eggs 13, cheese 30, peas 22, lentils and pea-nuts 24, and beans from 22 to 30 per cent. Bananas, milk, butter-milk, and mushrooms are rich in protein, and so are

corn and macaroni. If one-tenth part of the plant protein is unused on account of the cellulose tissue with which it is associated, plant foods still have in several instances an actual superiority in protein value over those of flesh origin.

There are, then, four sources of protein available to man besides muscular tissue, *any one of which* is capable of supplying the human race with all of the flesh-forming material needed. First, there are the nuts (the chief food of the apes and monkeys), dozens of different kinds of them, and now prepared by man in the most varied, delicious, and assimilable forms; second, the grains (the sustaining substances of all man's burden-bearers), also prepared in hundreds of different forms, cheap, wholesome, nutritious, and many of them already partially digested; third, cheese, milk, and eggs; and fourth, the pulses, such as beans, peas, lentils, and pea-nuts. ✕

The contention that the sources of plant protein are insufficient to meet the requirements of the human body never did have much force, except with the half informed and the wilfully ignorant; and in view of the foregoing and in the light of recent experiment, it has lost what little strength it did have. In the ideal dietary the protein foods will be reduced to the minimum required for muscle-forming purposes; for it is the protein that produces, in its ordinary katabolism in the human body, uric acid and other toxins which are so often the cause of human wretchedness and

disease, the products of burned starch, sugar, and fat being the comparatively harmless binaries, water and carbon dioxide.

Flesh foods are rich in water, containing from 40 to 60 per cent. of this useful but forceless fluid. Compared with many vegetable foods, they are a dilute form of nutrition. (Flesh foods have a nutrient value of from 40 to 60 per cent., while cereals, such as wheat, oats, rye, rice, and maize, have a nutrient value of from 82 to 90; legumes, such as beans, peas, and lentils, of from 79 to 86; cheese of 99; and nuts of from 85 to 100 (5).

The something like 24 ounces of nutrients estimated to be needed daily by the average man will produce, when burned in the body, an amount of energy sufficient to lift 4,300 tons one foot high. These 4,300 foot-tons (about 3,000 calories) represent the theoretical daily efficiency of the human machine, only a fraction of which, however, is available for work outside the body. In the following table is shown the *amount* of each of twenty-four different foods which would be required if used alone to produce the 4,300 units of energy of the standard daily dietary, and the *cost* of each amount:

<i>Foods.</i>	<i>Amount. Cost.</i>			<i>Foods.</i>	<i>Amount. Cost.</i>		
	lb.	oz.	cents.		lb.	oz.	cents.
Butter -	0	12	20	Oatmeal	1	8	6
Almonds	0	15	47	Cheese -	1	8	24
Pea-nuts	1	1	21	Macaroni	1	12	17

<i>Foods.</i>	<i>Amount. Cost.</i>			<i>Foods.</i>	<i>Amount. Cost.</i>		
	lb.	oz.	cents.		lb.	oz.	cents.
Rice - -	1	12	14	Bread - -	2	10	14
Arrowroot -	1	12	52	Beef—fat -	2	12	44
Cornmeal -	1	12	5	Beef—lean -	3	10	61
Pearl barley -	1	12	14	Ham—lean -	4	2	66
Dates - -	1	15	15	Mackerel -	4	6	66
Beans - -	1	15	11	Eggs - -	4	7	47
Peas - -	1	15	15	Bananas -	5	15	25
Sugar - -	2	0	13	Potatoes -	7	6	9
Figs - -	2	1	31	Grapes - -	9	0	45

The food amounts used in this table are from Church's 'Food'; the prices were furnished to me by my grocer at the time the table was made—summer of 1905.

As may be gathered at a glance from this table, there are great differences among foods in their power to produce heat and energy. Three-fourths of a pound of butter, and even less than this amount of olive-oil, will produce as much energy as a pound and a half of oatmeal or cheese. And a pound of oatmeal, or cheese, or rice, or beans, when oxidised in the body, is about twice as dynamic as the same quantity of boiled ham or butcher's beef.

The differences in cost are equally remarkable. At one extreme of the economical scale stands cornmeal; at the other mackerel. The 4,300 foot-tons of energy required daily by a human being can be bought in the form of cornmeal for 5 cents, in the form of oatmeal for 6 cents, potatoes 9 cents, and beans 11 cents; but in the form of ordinary

butcher's beef the same amount of energy will cost 50 or 55 cents.

From the standpoint of economy alone, the diet of the fields and orchards ought to appeal successfully to every one possessed of undoubted sanity. One acre devoted to wheat will support ten times as many men as one devoted to grazing. If men would take the beautiful products of the soil fresh from Nature's hand, instead of sitting down and devouring, in the form of the accumulated residuum or ruminants, an acre at a meal, the problems of human poverty and over-population would be immensely simplified.

Wheat and oatmeal are almost perfect foods in themselves, for they contain in about the right proportion the various food elements necessary for maintaining all the functions of the body. Milk, bananas, rye, buckwheat, tomatoes, macaroni, and almonds are also well-balanced foods. Fruits are the most delightful, nuts the most concentrated and dynamic, butter-milk the most wholesome, and grains the most economical, of all terrestrial nutrients. Rice is the 'staff of life' of one half of mankind, and wheat of the other half.

(Now, since vegetal fat is identical chemically with animal fat, and vegetal protein with animal protein, since these substances are found abundantly in non-flesh products, and since the only other food substances used by man (starch and sugar) are not found except in plants and plant products, it may be asserted positively that from

the standpoint of food-supply there is no reason why man should prey when he eats. The plant world contains all of the compounds necessary for human alimentation, it contains them abundantly, it contains them in forms of the highest delicacy and the greatest variety and economy, and it contains them in a much more prime condition than they are found in the diseased tissues of our mistreated servants.)

The dietetic habits of the non-human races of the earth tend to confirm the conclusions arrived at through a study of foods. The food question is not exclusively a human question. It is a question which, like every other question, must be considered from the broad standpoint of the universe, in order to be dealt with rationally.

It is a common supposition that animals are, on the whole, overwhelmingly carnivorous. And this supposed fact is often cited in justification of the carnivorous habits of man. If the supposition were true, it would have no such significance as is ordinarily imputed to it. For man does not, in the first place, need to sit at the feet of those inferior to himself in order to learn what is proper and what is improper; and, secondly, if he did need to do so, he would not need to choose the most savage as his models rather than the most civilised.

But the supposition is not true, anyway. A large number, certainly a majority, of the million and more of species of animals living on the earth derive their aliment directly from the fruits, flowers,

foliage, grains, stems, bulbs, barks, roots, nuts, juices, seeds, and secretions of plants. These species are scattered throughout the animal kingdom, from protozoa to primates. The insects, representing about one half the known species of animals now occupying the earth, live prevailingly on plants and plant products. Fishes and reptiles, like men, are prevailingly predaceous. The most beautiful of the birds, including the most of those that sing and all those associated with man, live entirely or primarily on seeds, fruits, flowers, and grains.

The mammals are the most powerful and influential inhabitants of the earth ; and, excepting the dog, the most beautiful, the fleetest, the most sagacious, and the most useful of the mammals are strict phytivores. The horse, the most magnificent of all beings, whose strength rivals that of the engine and whose speed exceeds the wind, feeds on grains and grasses. The proverbial might of the ox is derived from the dynamite of the cereal. The elephant, whose strength uproots the forest, and the camel, the most enduring of all man's slaves, live on herbage. The camel will travel over the sands of the desert with a burden of 200 pounds on its back, at the rate of five or six miles an hour, for fifteen hours out of the twenty-four. This wonderful creature will keep this up every day for a week or more, without a drop of water to drink and with no food but cactuses, desert thorns, and a handful of barley-meal once a day. The moss-nourished reindeer attains a speed of ten

miles an hour when hitched to a sledge or carrying a pack. No carnivora can boast the enormous might of the rhinoceros, or the endurance and strength of the herb-fed mule. The gibbon is the most marvellous of all animals for its agility. It can swing 40 feet from one limb to another. It swings through the forest in such rapid succession as to rival in its speed the flight of birds, and it is said by those who have watched it in its exercises in captivity that it is able to keep up its amazing activities for hours without fatigue. The gorilla is strong enough to vanquish the African lion by main strength. According to the natives of Borneo, the orang is sometimes attacked by the crocodile when he goes to the river to drink, and the natives told Wallace that in such cases the orang defends itself by beating the crocodile to death, or ripping up his throat by pulling his jaws asunder. All of these anthropoids live on a simple diet of nuts, fruits, and young shoots.

The human-like monkey, the nimble squirrel, the windshod antelope and deer, the sheep, the swine, the llama, the hippopotamus, the mouse, the alpaca, the yak, the hare, the beaver, the manatee, the tapir, the kangaroo, the buffalo, the zebra, the giraffe, the musk-ox, the moose, etc., are all plant-eaters, and, as a class, they are far superior in character, strength, and intelligence to the carnivora. The carnivora are cruel, treacherous, and unsocial. The strength of the lion is largely fictitious—like his courage. Great strength has

probably been imputed to him on account of his vast voice and fearful facial aspect. His strength, like that of all the Cats, is but momentary, and in endurance he cannot be compared with the mule, the ox, the elephant, the reindeer, the rhinoceros, and the horse. All of man's burden-bearers are phytivores, every one of them. Indeed, excepting the cat and dog, all of the races of beings that man has associated with himself, whether mammals, birds, or insects, and whether they have been domesticated for their strength, fleetness, feathers, beauty, milk, or muscles, are vegetable feeders. Some of these facts might be brooded over profitably by those scantily informed people who imagine that strength and endurance are somehow associated with flesh foods.

It is not only possible to find in the plant world substances necessary to the sustenance of animal (including human) life, but we *necessarily* find them there, for they are to be found primarily nowhere else. All beings, whether phytivorous or carnivorous, are sustained by compounds obtained directly or indirectly from plants. 'All flesh is grass.' No animal can *create* starch, or sugar, or fat, or protein. This is a power of the plant, and of the plant only. The animal may, by the chemicals of its body, change food substances from one form into another, as proteins into peptones, starch into sugar, and sugar into glucose. These are superficial changes. They involve no synthetic process. They are effected by a simple shifting of

the atomic elements, and are brought about in order to make the substances more assimilable—that is, in order to get them into forms that will readily sieve through the cells and tissues of the body. No animal can create energy; more accurately, no animal can by molecular synthesis change kinetic energy into potential. All any animal can do is to dissipate the energy generated in the sunlit laboratories of the plant.

The sun is the source of all terrestrial energy, excepting that of the tides. The energy of volcanic and seismic disturbances is subterranean, and came to the earth long ago as a part of its original legacy from the solar mass. But the energy of moving air (winds and storms), the energy of moving waters (rivers, ocean currents, and waves, excepting tidal waves), and the energy of the organic part of the earth (plants and animals)—all of this energy comes to the earth as an infinitesimal part of the daily dissipations of our mighty fire, the sun. The energy of the engine is derived from the same source, for coal is 'fossil sunshine.'

Now, the plant is the sole receptacle for that part of the solar energy which shows itself finally in the phenomena of the organic life of the earth. The plant stores this energy in the form of potential compounds. It takes the simple binary compounds of water (H_2O), carbon dioxide (CO_2), and ammonia (NH_3), and, under the miraculous action of sunlight, converts them into exceed-

ingly complex and unstable compounds of starch ($C_6H_{10}O_5$), sugar ($C_{12}H_{22}O_{11}$), oil ($C_{57}H_{104}O_6$), and protein ($C_{72}H_{112}N_{18}SO_{22}$).*

Out of the three simple substances—water, carbon dioxide, and ammonia—the plant creates all of the compounds which give to the animal world its wonderful life and intelligence. The carbonaceous foods are made out of carbon dioxide and water alone, but protein requires ammonia or some other nitrogen-bearing substance in addition to carbon dioxide and water. Ammonia and water are sucked up by the plant through its roots, while carbon dioxide is subtracted from the air. In the manufacture of starch and sugar, carbon dioxide (CO_2) is imported from the air through the leaves, the carbon is separated from the oxygen, the oxygen is excreted, and the carbon combined with the hydrogen and oxygen of water (H_2O). A molecule of starch ($C_6H_{10}O_5$) is composed of 6 atoms of carbon chemically united with the equivalents of 5 molecules of water. Six molecules of carbon dioxide, plus 5 molecules of water, equals 6 molecules of starch, with 12 unused molecules of oxygen left over ($6CO_2 + 5H_2O = 6C_6H_{10}O_5 + 12O$). And one molecule of sugar ($C_{12}H_{22}O_{11}$) consists of 12 atoms of carbon and 11 molecules of water. Twelve molecules of carbon dioxide plus 11 molecules of water equals 12 molecules of sugar plus 24 atoms of waste

* The chemical formulæ given here for sugar, oil, and protein are the formulæ for saccharose, olein, and albumin respectively, as given by Gillespie.

oxygen ($12\text{CO}_2 + 11\text{H}_2\text{O} = 12\text{C}_{12}\text{H}_{22}\text{O}_{11} + 24\text{O}$). In the manufacture of fat ($\text{C}_{57}\text{H}_{104}\text{O}_6$) the most of the oxygen of the water also is eliminated as waste oxygen in addition to that contained in the carbon dioxide, and the hydrogen (or eighteen-nineteenths of it) is thus rendered available for combustion as well as the carbon. The fact that in fat the hydrogen and carbon are both oxidised, while in starch and sugar the carbon alone is available for combustion, the hydrogen being already oxidised, is what gives to fat its superiority over the carbohydrates as a heat- and force-producer. Fat yields, when burned, about two and one-third times as much energy as sugar or starch. According to the experiments of the United States Department of Agriculture, one pound of starch or sugar will produce 2,700 foot-tons of energy, while the same amount of fat generates 6,300 foot-tons.

The process of nutrition in plants is essentially a process of *deoxidation*—a process of oxygen elimination—a process whose end is the isolation of carbon and hydrogen from the ever-ardent oxygen. This process is effected through the action of sunlight on the mysterious chlorophyl, the green colouring matter ('leaf-green') of plants.

The food process in animals is the reverse of that in plants. It is a process of *oxidation*. The animal takes the compounds of the plant, and by degrading them to their original binary beginnings, changes the potential energy of the compounds

into the kinetic energy of animal life and motion. Oxygen is inhaled from the air (the oxygen the plant has thrown away as waste), and unites with the carbon and hydrogen in the tissues of the animal body, forming carbon dioxide, water, and urea, the urea, on leaving the body, undergoing additional degradation, forming, among other things, ammonia. These devitalised substances are excreted by the animal as waste products, to be again used by the plant as foods, and recombined by it into starch, sugar, fat, and protein, to be once more oxidised by the animal, and once more sent back to the plant on rounds of eternal metabolism.

The sun is the cause of all this marvellous change. The sun charges the plant, and the plant energises the animal. Erase the sun from the spaces and all terrestrial activities, excepting the tidal and plutonic, will in time cease. The earth is a dependent and satellite of the great sun, and when the sun dies this poor little hanger-on of ours must pass away with it.

The plant is the natural food of the animal, and the exclusive source of the life, thought, and infamy of the animal. When one animal makes a meal out of another, it simply reappropriates from the tissues of its victim the energy which its victim has previously derived from the plant. It simply uses second-hand that which its victim has taken first-hand.

The plant and the animal are socialists. They co-operate with each other. The plant is fixed

and passive. Its nature and organisation adapt it to the storing of energy. The animal is detached and active. Its nature and organisation make it a consumer of energy. The plant in the exercise of its natural functions creates that which is indispensable to the animal, and the animal in the exercise of its natural activities creates that which is indispensable to the plant. The plant and animal kingdoms are not two separate domains. They are bound together by common interests and reciprocal necessities. They are the supplemental halves of the organic whole.

The pioneers of the organic kingdoms of the earth were neither plants nor animals, but organisms uniting in their bodies the essential characters of both, and from these generalised ancestral protistans arose the true plants and animals, in response to the same laws of specialisation as those we see in operation around us on every hand to-day. Generalised organisms of this kind are still found inhabiting the waters of the earth, and in the old primordial times, before the rise of the true plants and animals, they must have been much more numerous than they are now. These generalised forms have become scarce or extinct through the action of the Law of the Survival of the Superior, which has operated through all the eras of organic evolution, which has in more recent times caused the disappearance of the mammoth, the dodo, the reap-hook, and the belief in ghosts, and which is destined in the fullness of the years to pitch our barbarous philosophies, our foolish

religions, and our pseudo-civilisations into the rubbish-heap of the past.

Whenever an animal, therefore, instead of accepting the bounty and co-operation of the plant, turns round and swallows its fellow, it violates one of the most venerable and primary adaptations in Nature.

CHAPTER VII

IS MAN A PLANT-EATER?

ARE human beings fitted structurally to use plants and plant products as food? Is man anatomically a phytivore?

(The structures of animals are the accumulated results of adaptations to surroundings. Every organism has been hammered into its existing form by the incessant impacts of environment, modified, of course, by the form with which the organism commenced to be. And what is true of each individual organism is true also of species, and of the animal kingdom as a whole, and of the entire organic appendage of the planet. The earth as a whole, indeed, and even the solar system in its entirety, are what they are at this moment, and will be in future what they are at any particular moment, as a result of the activities of the hammer of environment and the anvil of heredity, *and nothing else*;) just as truly as a field-mouse, or an opinion, or a species, or an avalanche, or any other integral thing on the surface of the earth or the surface of the sun is ex-

clusively the product of the same all-fruitful factors.

If, therefore, there had been from the beginning of life on the earth two separate and distinct classes of animals, the one living always on plants and the other on flesh, there would be to-day among the races of animal life two unmistakably distinct types of structure corresponding to the two kinds of food. Flesh foods and plant foods are identical chemically, and undergo the same changes in digestion. They also fire the same energies, and feed and refresh the same tissues. But there are differences of a non-chemical character between the two kinds of foods, which would, if the foods had been used consistently during the long process of evolution, have brought about clear and unmistakable differences in the two classes of animals using them.

But species have not been consistent. They have vacillated from one form of diet to another, driven hither and thither from environment to environment in the desperate scramble for life. And these vacillations, this crossing and reticulating of the lines of evolution, have mongrelised the structures of most animals, and rendered the differences between the carnivore and the phytivore in many instances vague. Animals as different from each other as the chimpanzee and the tiger, the one living on fruits and nuts and the other on flesh and blood, differ less in the architecture of their digestive systems than the horse and the ox, who eat the same foods and lead the

same kind of lives. The seal has one stomach and the porpoise has two, yet they both prey on fishes, and both swallow their prey alive.

Whenever, for any reason, a species changes its habits of diet, the change which takes place in its structure, as a result of its new mode of subsistence, *must be grafted on* the structure which it has inherited from its previous mode of existence, just as that structure has, in like manner, been grafted on to a structure inherited from another still different and more remote existence. Nothing begins *de novo*. Everything has come from something else—is some other thing worked over. And this antecedent thing, this ‘raw material,’ always takes a part, large or small, in determining what sort of thing it is to become.

Human mothers sometimes, when hard pressed by poverty, and compelled to provide for the sartorial necessities of a rapidly-growing family, take outgrown but not worn-out garments, and make them over into other garments in greater demand at the time, or better suited in size and style to the increased age of the child. And the success of the transmutation always depends to a large extent, as some of us remember so well, on the particular form of the original garment, and on how much change it is called upon to undergo. A garment that has been made out of another similar garment, as one waist out of another waist, is a very different thing, topographically and architecturally, and has very different powers of affecting those who look at it, from one that

has come from an entirely different garment, and is the result of the crossing of distinct sartorial types, as a waist that has come from a coat, or a coat that was in its previous existence a pair of trousers. The differences are still more varied and wonderful if these ancestral garments have also themselves acquired their characters through a longer or shorter and a more or less picturesque series of earlier metamorphoses.

It is so with everything. The potter is not absolute master of his clay. The clay takes an inevitable part, sometimes prominent and sometimes humble, depending on the patience and ingenuity of the potter, in determining what sort of thing it is to be turned into.

The structure of a species, therefore, does not depend solely on what sort of food the species eats, nor on what kind of life it leads, but also *on what its ancestors ate and did*. Structure is the result of adaptations to environment, but the adaptations which have brought about any particular feature of structure may have taken place in time vastly antedating the advent into existence of the individual, or even of the species, possessing the feature.

The stomach of the chimpanzee resembles that of the tiger, and the stomach of the porpoise differs from that of the seal, notwithstanding the gastronomic practices of these animals at present justify opposite expectations, because the chimpanzee and the tiger are more closely related philogenetically than the porpoise and the seal.

The far-away forefathers of the chimpanzee lived on flesh, while the distant ancestors of the porpoise probably ate grass. The porpoise and the seal are both mammals, and are both descended from land quadrupeds. Long ago they left the land and went to live in the surface of the sea. But they are degenerates of different orders. The seal is undoubtedly a degenerate carnivore, probably a Bear or a Cat; but the porpoise is supposed to be a much-changed descendant of some generalized form of hoofed animal—a sort of hog that has taken to the sea, and in the ups and downs of several millions of years of sea life been kneaded into a ‘fish.’ The horse and ox are both ungulates, but they represent lines of development that diverged from each other millions of years ago. The ox is a ruminant, and belongs with the sheep, antelope, and camel; while the horse belongs to the more archaic and less successful type of ungulates represented by the rhinoceros and tapir.

We see the tops of things only when we look at the present. Everything must be looked at in the light of its evolution—*everything*—whether it is an organ, an institution, a problem in sociology, or a geological formation. It cannot be understood in any other way. When *will* men, I wonder, learn this invaluable truth? We are at the beginning of a great change in our methods of applying the understanding to the solution of human problems. I am sure of it. Oh, I see a new world rising out of the future! Oh, a

hundred thousand years from now! Who then, what manner of beings, will ennoble these seats where now we earthworms crawl?

Plant foods are fixed. They have no power to escape those who would use them for nutritive purposes, and no desire to do so.

Flesh foods are different. They can feel and move about, and have a deep-seated repugnance to being eaten. They struggle to get away, and with the strength and sincerity of those about to die.

Hence, animals that live on other animals, if they have been in the business for some time, always have parts developed for dealing with recalcitrants—claws and talons with which to hold their victims, and beaks and blade-like teeth to tear them to pieces. The teeth of plant-eaters are fashioned for grinding, those of flesh-eaters for cutting and killing. The incisors of flesh-eaters are narrow and pointed, instead of flat and chisel-shaped, as in the plant-eaters, and are generally much smaller than the canines. The canines of carnivora are long, sharp, prominent, and dreadful-looking. They are two or three times as long as the other teeth, and overlap each other when the mouth is closed. The canine teeth are the great holding and death-dealing instruments of the flesh-eaters. In the aquatic flesh-eaters the teeth are spikes, with intervals between them. They are sharp and pitiless, point slightly backward in the mouth, and are adapted to prey that is slippery and agile but not very strong. There are other differences between the plant-

eaters and flesh-eaters. They are internal. Plant foods are always associated to a greater or less extent with cellulose, while flesh foods are not. Cellulose digests with difficulty. It is hard to dissolve. The particles of vegetal starch, sugar, fat, and protein are enmeshed within this tissue of cellulose, and are thus rendered less accessible to the digestive chemicals than the flesh foods are. The resistance of cellulose to the digestive fluids is overcome by man through the use of fire, by artificial grinding, and the like. Cooking softens the cellulose, and causes the food granules to swell and burst the walls of the cells. Vegetal foods, through cooking, milling, artificial digestion, and other preliminary processes to which they are subjected by human specialists, are rendered more digestible even than flesh foods, and almost as assimilable. The testa of the bean, which consists largely of cellulose, and which is sometimes an objectionable feature of this valuable vegetable when the cooking is done by boiling, may be completely changed and rendered entirely innocuous by the higher temperatures of the baking oven. Unground grain may lie in the stomach of the fowl for sixteen hours or more before it is digested, but when made into meal and cooked will be digested in one-sixth or one-seventh of the time.

But non-human races know nothing of the uses of fire. Hence, those species living on vegetal foods, and especially those that digest cellulose, require and have invariably larger and more

elaborate digestive tracts than those living on flesh.

The alimentary canal of flesh-eaters is short and simple, being in mammals commonly about four times the length of the body. The stomach is a single sac, excepting in those species, like the porpoise, which have acquired their characters as an inheritance from plant-eating ancestors. The colon is smooth and cylindrical, never pouched or sacculated, and is often little larger in diameter than the small intestine.

The alimentary tract is largest and most highly specialised in the ruminants. Ruminants have four stomachs, colons that are long, large, and complex, and digestive tracts that are fifteen or twenty times the length of the body. These are the cellulose-eaters. The alimentary canal of the horse is 125 feet long, the ox's 150 feet, and that of the sheep twenty-eight times the length of the body, while that of the lion is but three times the length of the body. In the plant-eating rodents and kangaroos the alimentary canal is also long, and the stomach has generally two or three compartments. The alimentary canal of birds is shortest in the flesh-eating raptorial birds, being about twice the length of the body, and is longest in those birds living on grains and berries. The carnivorous reptiles have food canals about twice the length of the body, but the vegetable-feeding tortoises have comparatively long intestinal tubes. The relation of length of intestine to the kind of food is well illustrated by the frog. The tadpole

is a vegetarian, and has a long intestine ; but when the tadpole develops into a full-grown frog, and lives on insects, the intestine contracts until it is relatively much shorter. Carnivorous fishes have a much shorter and simpler intestinal tract than the herbivorous. The same thing is true in the insects. There is neither crop, gizzard, nor large intestine in some of the carnivorous insects, and a digestive department is entirely lacking in the parasitic tapeworm.

The question whether man is or is not by nature a plant-eating animal has arisen, not so much because of ambiguities in human anatomy, as on account of the inconsistency between human structure and human practice. Men are carnivorous in practice. This sort of life suits them. They would like to continue it. But the race is evolving. The carnivorous life is repugnant to the humane instincts of the race, and antagonistic to the altruistic tendencies of human evolution. The carnivorous life is denounced by the tenderer and more enlightened elements of mankind, and so those under indictment begin to rake and scrape to see what they can turn up in vindication of their beloved and imperilled rapacities. They find, happily, that Nature is 'red in tooth and claw,' that man has 'canine teeth,' and that human beings are without the five stomachs of the ruminantia. Of course, man is a carnivorous animal ; couldn't be anything else if he wanted to be ; would probably peter out if he attempted it ; and it is not necessary to try to be anything else, any-

way, if he could be, for he is in harmony with the all-wise and perfectly lovely régime of bloody Nature already. Mighty slim pegs on which to suspend a life of crime, considering that their substance is purely imaginary! But sufficient for those who have made up their minds beforehand to be satisfied with whatever there is. The great facts of evolutionary science, the kinship and unity of life, the promptings of the sympathetic instincts, and the insistent significance of historical ethics, are all entirely ignored—*because* these are not the things men of blood are looking for; they are not the things that will serve their purposes. Men who contend for human carnivorousness are themselves carnivorous, and they have a personal interest in maintaining the respectability of this practice. They are not investigators, or are very seldom such anyway, and their opinions have no such standing or validity as would naturally attach to the conclusions of honest and disinterested searchers after truth. They are fencers. They are defending themselves. They are seeking something that will stay the growing hostility to their life of shameless savagery. They see, and emphasise, and hang round, and dwell upon, those things that will be of use to them in their business, and shut their eyes to, and pooh-pooh, and slur over, everything else—like the old woman with the dream-book, who never paid any attention to the times when her dreams *didn't* come true, only the once-in-awhiles when they *did*.

There is no more uncertainty about man's dietetic place in Nature than there is as to whether man is or is not a primate. If we look at man in the light of comparative anatomy, look at his general structure and appearance and the structure of those parts especially concerned with the seizure, mastication, and digestion of food—that is, the hands, teeth, and alimentary canal—and compare the structure of these parts with the structure of corresponding parts in other species of animals, we find that there is but one conclusion possible, and that is that man, whatever his habits, *is anatomically a phytivore*.

Man has all of the qualities of structure of the phytivore, and not a single distinct character of the carnivore. He has neither claws with which to hold his victims, nor teeth fitted for rending them. His hands, face, nails, and teeth are in all essentials identical with those of the frugivorous anthropoids, from whom or along with whom he has acquired his characters. His incisors are flat, broad, and large, as are those of all plant-eaters; not small and pointed as in the carnivora. His molars are fitted for crushing and grinding, never for tearing; and his jaws are without the scissor-like articulation of the carnivora. The mouth of the carnivore is an arsenal; man's mouth is a mill.

Man's so-called 'canine teeth' are not canine teeth at all—that is, they are not functionally homologous with the holding and tearing teeth of the dog and other carnivora. The human 'canine' is an anatomical fiction—'canine' in

name only. Genuine canine teeth are large, sharp, and strong, and from two to four times the length of the adjacent molars and incisors. They are the implements which give to the carnivorous mouth its characteristic aspect of ferocity, and no one who observes them even casually can have any doubt as to what they are for.

But man has no such teeth, nor anything in any way approaching them. The canine teeth of the human mouth are *anatomically* homologous with the canine teeth of the carnivora, but *not physiologically* homologous. They correspond in *origin* to the tearing teeth of the flesh-eaters, but *not in adaptation and use*. Human canines are not used for holding or tearing, could not be so used, *and in order for them to have dwindled to their present dimensions they must have remained inactive as instruments of arrest for millions of years*. Man's canines correspond in size and length to his other teeth. They are not conspicuous. Indeed, man's teeth in every way are much farther removed from the carnivorous type of dentition than the teeth of the frugivorous apes. Canine teeth far more prominent than man's exist in such Simon Pure vegetarians as the gorilla, the orang, the musk-deer, the hippopotamus, the wild hog, and the horse. They are found in these animals chiefly in the males, and have probably been developed in the struggle for sexual supremacy. The most eminent canines to be found in any mouth on earth exist in some of the wild hogs, notably the wart-hog of Africa and the fruit-eating babirusa

of Celebes. They grow sometimes in these animals to be over a foot in length, and look like horns.

And yet, although the inferences to be drawn from the character of man's teeth are plain and indisputable, we still hear people—not ignorant people merely, but biologists—continuing to talk about 'the significance of the canine teeth in man.' In the laboratory manual on zoology now used by the author the following question occurs among others of the same kind: 'What does the presence of canines and molars indicate regarding the natural food of man?'

If it is possible to class man as a carnivorous animal by calling his teeth 'canine,' regardless of the fact that these teeth are in no way fitted to be used as they are used by the carnivora, and simply because they are the *descendants* of canine teeth, then in the same way we may class man with the quadrupeds by calling his upper limbs 'legs.' Indeed, since limbs in the original vertebrates (fishes) were fashioned and used for swimming, we may carry our argumentative agility to still greater heights of absurdity, and prove that not only men, but birds and quadrupeds as well, are all *aquatic* by calling their locomotory appendages 'fins.' Men with feeble powers of recognising distinctions may be deceived by the calling of two different things by the same name, but no one else can possibly be.

The alimentary canal of man is from 28 to 30 feet long. This is from ten to twelve times the

length of the body, exclusive of the lower limbs. Some anatomists speak of man's alimentary tract as being about six times the length of the body, estimating the length of the body as the distance from the mouth to the feet. *This is misleading and false*, for no other animal is so measured. The relative length of the body and alimentary canal in man is approximately the same as that of the ape. Man's colon is long, large, and pouched, as is the colon of all phytivores. If man is structurally a carnivorous animal, he is the only carnivorous animal on earth having a sacculated colon, the colon of flesh-eaters being invariably smooth and cylindrical. Man has a single stomach, but this is not an exclusive character of the carnivora, for such vegetarians as the horse, the hog, the hippopotamus, the elephant, and all of the apes and monkeys, have single stomachs. In the case of man and the other primates the single stomach, like the double stomach of the porpoise, is undoubtedly an inheritance, the distant ancestors of the primates having been flesh-eaters.

Man has not in his structure anywhere a single fact indicative of carnivory; but he does have just such a structure as we would expect a confirmed phytivore to have who had originally been derived from or made out of a carnivorous animal. And if man were studied objectively, were studied as an extinct and unknown animal by the biologists of Mars or the moon, or by any other biologists acquainted with the facts and principles of biological science, but ignorant of human habits

and uninfluenced by human prejudices, he would unquestionably be classed as a plant-eating primate.

Scarcely less significant as a fact bearing on the problem of human diet than the fact that man has the structure of a plant-eater is the fact that his ancestors for millions of years have been plant-eaters. Even though man's structure were what it is, if he were the scion of a line of flesh-eaters, there might be room for doubt, in view of his practices, whether he were more than a mere mongrel. But springing, as he does, from a long line of plant-eaters, and possessing a digestive structure like that of his antecedents, his plant-eating nature may be said to be *proved*.

All of the anthropoids—orang, gibbon, chimpanzee, and gorilla—are, in their native haunts, frugivorous, living on nuts, fruits, leaves, young shoots, etc. Occasionally they eat birds' eggs, but never taste flesh unless driven to do so by necessity.

The ancestors of the anthropoids, the monkeys, are also plant-eaters. Some species of monkeys sometimes eat eggs, insects, and small birds, but these species are genealogically farthest from man. Their food is primarily nuts and fruits, the products of the forests among which they spend their lives.

Whether man is descended from one of the existing anthropoids, or, as seems most likely, from some extinct man-like form, which, together with existing man-like apes, sprang from a common pre-anthropoid ancestor, in either case the genea-

logical line of which man is the terminus and flower has in all probability consisted of plant-eaters since the Eocene age of geology. For, if the tailless primates (anthropoids and men) sprang from a common stock, this pre-anthropoid form must have been a plant-eating animal, first because it was a monkey, and second because its litter of descendants are all structurally plant-eaters.

The plant-eating characters of the human body never could have been developed by a carnivorous, nor even by an omnivorous, ancestry. The primate order of animals has its roots in the order of the carnivora, and man's distant ancestors were, therefore, carnivorous animals. Hence man must have had a long line of vegetable-feeding antecedents in order for the carnivorous characters of structure inherited by him from his distant progenitors to have been so completely abandoned as we find them to be in the human body.

Man came to be a man—an animal with hands and perpendicularity—through the trees. It was the arboreal life of pre-human beings that led to the perpendicular style of structure which we find prophesied in the monkeys, partially developed in the man-like apes, and completed, or at least improved, in man.

The primates were probably driven to the trees in the struggle for life in order to escape the ravages of more powerful species living on the ground. Here, among the new conditions surrounding them in the trees, they acquired the characters which finally entitled them to be classed

as a distinct order of animals. And it was here among the fruits and flowers and foliage of the great tropical forests of the earth that they gave up their carnivory and acquired those adaptations of structure peculiar to the frugivora. Man, like the gorilla and chimpanzee (who never go among the trees except to sleep or to escape danger or to get food), is a terrestrial animal, walking and living on the ground. He is simply a post-arboreal form that has come down from the trees, and, during the past several hundred thousand years of running from his enemies, fighting with his fellows, and digging in the ground, been hammered into a fairly successful land animal. Even yet sometimes, as boys and girls, when the old, old ghost of other days comes up in us, we go back to the blessed trees, and climb and swing among them and feel the joy of the spurned ground, in obedience to an impulse that is all but spent in us, but which was strong and important in our ancestors who felt the breezes in their hairy faces as they swung in the forest-tops long, long ago.

So whatever probabilities are favoured as to man's relation to existing primates, the evidence is of sufficient verity to show almost to a certainty that the characters to-day found in the human body were acquired by plant-eating ancestors who lived and loved and feared and fought among the gardens of the sky during the past two or three million years. The facts of phylogeny, therefore, confirm convincingly the inference created by the facts of comparative anatomy.

These facts of structure and genealogy have been recognised by the ablest anatomists of the world as decisive in settling the question as to man's dietetic place in Nature.

'The apes and monkeys, whom man most nearly resembles in his dentition, derive their staple foods from fruits, grains, nuts, and succulent vegetable forms; and the close resemblance between the human and quadrumanous dentition shows man's frugivorous nature' (Owen, 'Odontography').

'Fruits, nuts, and the succulent parts of vegetables appear to be the natural food for man. His hands afford him facility for gathering them, and his short and comparatively weak jaws, his short canine teeth, not passing beyond the line of the others, and his tuberculous cheek teeth, would not permit him to feed on herbage or devour flesh. The organs of digestion are in strict conformity with those of mastication' (Cuvier, 'Animal Kingdom').

'Man's organisation, when compared with that of other animals, shows that fruits and esculent vegetables constitute his most suitable food' (Linnæus).

'The teeth of man have not the slightest resemblance to those of the carnivorous animals. Whether we consider the teeth, jaws, or digestive organs, the human structure closely resembles that of the frugivorous animals' (Lawrence, 'Lectures on Physiology and Zoology').

'It has been truly said that man is frugivorous. All the details of his intestinal canal, and above all

his dentition, prove it in the most decided manner' (Pouchet, '*Pluralité de la Race Humane*').

'It is, I think, not going too far to say that every fact connected with human organisation goes to prove that man was originally formed a frugivorous animal. This opinion is principally derived from the formation of his teeth and digestive organs, as well as from the character of his skin and the general structure of his limbs' (Sir Charles Bell, '*Anatomy and Physiology of the Teeth*').

'At the period and place, wherever and whenever it was, when man lost his hairy covering, he probably inhabited a hot country—a circumstance favourable for the frugivorous diet on which, judging from analogy, he subsisted' (Darwin, '*Descent of Man*').

When man first reddened his lips with the blood of his fellows, and how he happened to do so, will probably never be known. It might have been in some time of famine. It might have been as he stood about the smoking altars of his sacrifices, after he had invented religion and fire. We only know that the time was when he lived simply on a natural and guiltless diet, and that the time now is when he has fallen from this better way.

The fact that children have naturally little or no taste for flesh foods, and crave fruits and other sweets, and are exceedingly fond of nuts, and the fact that the traditions of ancient peoples generally go back to a Golden Age when men lived innocently on the fruits of the fields, suggest that man

is predaceous from habit and tradition rather than from any inborn impulse or anatomical necessity to be so. If man were by nature a carnivorous animal, his young would come into the world with a craving for flesh, as young dogs do, and the young of all other carnivora. Children would not need to be hired to eat a certain amount of meat every day, as I have known to be the case. The cry of the lamb and the low of the heifer excite the salivary glands of the young tiger, and cause it to become alert, but these things have no such effect on human young. *If man were by nature carnivorous, the taste of raw flesh would be more pleasing to the palate of the child than the flavour of fruits, and the smell of the slaughter-house more acceptable than the fragrance of the orchard.*

Sir Benjamin Richardson, one of the greatest physicians England ever produced, says: 'In all my long medical career, extending over forty years, I have rarely known a case where a child has not preferred fruit to animal food. I say it without the least prejudice, as a lesson learned from simple experience, that the most natural diet for the young, following the natural milk diet, is fruit and wholemeal bread, with milk and water for drink. The desire for this same mode of sustenance is often continued into after-years, as if the resort to flesh were a forced and artificial feeding which required long and persistent habit to establish' (8).

'Few children,' says Sir Henry Thompson, 'like that part of the meal which consists of meat, but prefer the pudding, the fruit, and vegetables.'

Many children manifest great repugnance to meat at first, and are coaxed, and even scolded, by anxious mothers until the habit of eating it is acquired. I am satisfied that if the children followed their own instinct in the matter the result would be a gain in more ways than one' (9).

Rousseau wrote: 'One of the proofs that the taste of flesh is not natural to man is the indifference children exhibit for meat, and the preference they all show for vegetable foods, such as milk, porridge, fruit, pastry, etc. It is of the highest importance not to denaturalise them of this inborn taste, and not to render them carnivorous, at least for the sake of their characters, if not for health reasons' (11).

In his pamphlet on 'The Food Factor as a Cause of Health and Disease during Childhood,' Dr. Winters, Professor of the Diseases of Children in the Medical College of Cornell University, says: 'There is more so-called nervousness, rheumatism, valvular disease of the heart, and chorea in children at the present time from excess of meat and its preparations in their diet than from all other causes combined.'

Oh, mothers and fathers! is your duty not plain? Save us in the morning of the generations. Call back the race from its flesh-tearing to feed once more on the guiltless fruitage of the fields. Spare your children the irreparable wrong of being taught by precept or example the unholy taste of blood.

The millions of India, China, Burmah, Siam,

and Ceylon are to-day, and have been from time immemorial, vegetarians. Both Hinduism and Buddhism, the two great religions of the Orient, teach as a prime precept compassion for all living creatures. From their religious reverence for many animals, and from food products found in their tombs and temples, we know that the ancient Egyptians lived even more than their modern descendants do on the bounties of the unfailing Nile. The ancient Greeks and Romans were also vegetarians—at least, the masses of the people were. ‘Bread, wine, and oil—on these abundant and beautiful products of the Italian peninsula the mass of its inhabitants lived and thrived in ancient times, as they do to-day. Wheat was the grain most grown by the Romans, and wheaten porridge or bread their staple food’ (6). In the ruins of Pompeii were found marvellous products from the fields and gardens of ancient Italy. The Greek and Roman armies ate no flesh. The diet of the Roman soldiers consisted of wholemeal bread, oil, honey, cheese, beans, onions, and other vegetables. Coarse wheaten cakes, made by pounding wheat in a mortar and baked by the soldiers themselves, formed the backbone of the diet on which Rome conquered the world. Evidence of the use of many fruits and grains by the ancient lake-dwellers of Denmark, Switzerland, and Savoy is furnished by the abundant preservation of these substances in the ruins of their villages. On the other hand, the shell heaps of the Baltic, and the bones of quadrupeds found in many caves once tenanted by

man, show that many of the primitive peoples of Europe used animal foods extensively.

Important changes in structure, when they are brought about by the slow processes of natural selection, are the work, not of hundreds or thousands, but of millions of years; and, although it is not known how long men (or some men) have been carnivorous, we do know that the time has not been sufficiently long to change in any way man's frugivorous structure. The time during which men have used flesh foods is probably as one to hundreds compared with that immense period of time during which man's frugivorous ancestors were laying the foundations of human anatomy.

The objection, therefore, that man cannot practise the principles of the New Ethics because it is necessary for him to violate those principles in obtaining his food is without any foundation in fact. There is not a single reason, excepting those arising from selfishness and inertia, why the human race may not live and be as well off—may not, indeed, live and be much better off—without a mouthful of the flesh or blood of any other race. Neither from the standpoint of food-supply nor from the standpoint of structure is there a single valid reason why man may not lead a bloodless life if he wants to do so.

This is an exceedingly important and gratifying fact to every one who takes an interest in the salvation of man and the reformation of the world. If the animal who has come into the leadership of the earth, and who is destined to

exercise a dominating influence on terrestrial affairs for unknown centuries to come (it may be to the end of organic life), were a being bound to a career of crime by the necessities of his structure, and it were necessary not only to revise his instincts, but to reconstruct his anatomy, before the simplest acts of universal altruism were natural to him, the outlook for the redemption of the world would be dark indeed.

Even though man were less perfectly adapted to a vegetal diet than he is, there are reasons for believing that there is enough flexibility in his structure, enough facility for adaptation to new conditions, to enable him to change from his present diet to one in harmony with his ideals without diminishing in any way his happiness or efficiency. If man could change from a vegetable to a flesh diet in spite of and in opposition to his structure, he could change back again when he has all the facts of structure in his favour.

Owing to the similarity of flesh and vegetal foods, animals easily adapt themselves to a very different diet from that to which they are accustomed. This is especially true of polyphagous animals, that live normally on a variety of foods. It has been this ease of transition from one form of diet to another that has allowed whole species and entire orders of animals to cross over from a vegetal to a flesh diet, or from a flesh to a vegetal diet, in response to the shiftings of evolution throughout the ages of the past.

Pawlow has shown that alterations in diet are

accompanied by corresponding changes in the ferments of the digestive fluids. 'If, for example, one feeds a dog for some weeks on bread and milk only, and then changes to a purely meat diet, which contains much more proteid and no starch, one observes a gradual increase in the proteid ferments of the pancreatic juice, while the starch-digesting power falls off.'

Hunter once fed a gull on grains for a year. At the end of that time its stomach had changed from the soft stomach of the flesh-eater to the hard muscular gizzard of the granivore (7). On the Shetland Islands there is a species of gull that feeds on grains in summer and flesh in winter, and the character of the stomach is said to alternate in adaptation to its diet (7). The cows of Norway feed on grasses during the summer, but in winter along the coast they are fed on fodder made of the heads of cooked cod (7). Eels usually eat animal food, but they may be taught to eat bread.

There has been a great change in the diet of dogs since the beginning of their association with man, when the dog was entirely a flesh-eating animal, like the wolf, fox, and all other *Canidæ*. The great mass of dogs are now normally omnivorous, while a good many of them have departed so far from their original habits as to eat no flesh at all. The wonderful improvement in canine character which has taken place since dogs were wolves, while it is to be attributed primarily to ages of selection, is no doubt due in part to

their adoption of a more wholesome and civilised diet. We know that dogs fed on a vegetal diet are more affectionate, healthy, and intelligent than the same dogs when fed on flesh. Mrs. Leighton, of Pangbourne, England, in her excellent little book on 'Home Treatment of Dogs,' a book all dog-lovers should read, states, as a conclusion of her wide experience with all kinds of dogs, that the only way to keep both dogs and cats free from disease and in perfect temper is to keep them absolutely away from flesh foods of every description, and allow them only one meal a day, consisting of a single Spratt's cake, varying in size with the dog.

Different species of the same group of animals often live on entirely different kinds of food from each other, and it is reasonable to suppose that these differences have arisen since the origin of these species in response to the different conditions to which they have been compelled to adapt themselves in the struggle for life. Most apes and monkeys live on fruits, but the marmoset is said to have an inordinate appetite for cockroaches (7). The lizards of the Eastern Hemisphere are carnivorous, while those of the Western are mostly herbivorous. Parrots, as a rule, are vegetarians, but some eat insects, and even meat. The kea, a parrot of the highlands of New Zealand, has become exceedingly carnivorous since the introduction of sheep into those islands, attacking the living sheep, and burrowing holes in their backs. Water turtles are carnivorous; land tortoises are

phytivorous. The Arabs of the desert live on the milk and flesh of the camel, but where the date-palm abounds they live on fruit. A correspondent writing from Fez says that in that sand-girt oasis not only the men, but the camels and horses, and even the dogs, all live on dates. The French and Spanish peasants live chiefly on vegetable food, eating little meat, and the same thing is true of the agricultural masses of most of the Continental countries of Europe. The Eskimos, on the other hand, scarcely ever taste vegetable food, living their whole lives long on flesh and oil.

It would, in some respects, be easier for man to be a phytivore than for almost any other animal. He has a bodily structure adapted to this life, and he can bring to bear in the production and preparation of his foods an amount of intelligence denied to all other animals. Man can sow and reap. He can delve into the earth, and bring up the glittering riches of the rocks. He can harness the storms and waterfalls, and in his hands are engines with which he can remodel the face of the earth. By his wonderful art of selection, he can create foods with flavours and nutrient ratios to suit himself. He can almost do what the sunbeams do in the mystic alembics of the leaf. He can cook. He can digest his meals before he eats them. He can preserve food from season to season. He can pile his markets with the harvests of June in January. He can build ships, and send them to forage in far-off continents. He sits down at meal-time to a repast to which distant zones have

contributed, and in the collection and preparation of which many peoples have taken part. The nations of Northern Europe eat fresh fruits in mid-winter, carried in ice-cold ships from the orchards of Australia and Cape Colony; and the people of Northern and Eastern United States have their markets piled with fresh fruits and vegetables the winter through, brought on never-stopping freight trains from the gardens of California and the Gulf. There is no winter any more in the markets of the great cities of the United States, and the time is not far distant when commerce will be so perfected and unified that this will be true of the entire world. The great difficulty that confronts civilised man at meal-time to-day is not, excepting among the very poor, the difficulty of getting enough to eat, but the difficulty of exercising that degree of self-control necessary to keep from eating too much.

When one sees the variety and abundance of beautiful and bloodless fruits that gorge the markets of civilisation, and considers the amount of art available for cooking and compounding this abundance, and considers, too, what might be still further accomplished in the production and preparation of foods by scientific attention to the matter, it seems so strange, so sad, and so frightful, that man, elected by the accidents of evolution to be the model and schoolmaster of the world, and adapted so signally to a guiltless diet, should continue to perpetrate in the daylight of the twentieth century the barbarous, blood-sucking atrocities of the reptile.

CHAPTER VIII

THE FOOD OF THE FUTURE

A DIET of fruits, grains, nuts, and vegetables, with dairy products and eggs, is the ideal diet of man. It is the diet for which he is anatomically fitted. It is the diet which is able to produce the greatest strength and endurance, the highest health and happiness, and the most exalted sweep of the mental and emotional powers. It is the diet on which man is destined to attain his greatest glory and civilisation in the ages to come.

A carnivorous animal is not an ideal animal, and never can be. The life of a carnivorous animal is a perpetual onslaught. *Every meal is a murder.* Eating is not the harmless activity it is to one who sits down to fruit and grains. The carnivore must kill somebody, or have somebody else do it for him, in order to eat. It cannot be otherwise. And an animal whose life is one unbroken succession of such necessities, whose stomach is the grave of hundreds and thousands, and even of tens of thousands, of his fellow-beings,

may be meritorious in other respects—may preach the Golden Rule, decry war, give money to the missionary, and rail at the rich—but so long as he continues to fill himself every few hours with the blood and vitals of others, he is not only not an ideal animal, but has in reality no just claims on life. Flesh is a painful form of nutrition for any organism, but it is especially so for man, because it is unnecessary, and because man makes so many pretensions and occupies a position in the world of such exceptional responsibility.

Flesh foods are coming to be recognised more and more by physicians, teachers, writers, and progressive and scientific people generally, as being not only unnecessary and immoral, but as actually inhibitory of the highest efficiency and well-being in man himself. The meat fetish is nothing but an idol, a delusion pure and simple, which has been foisted upon us, like so many other delusions, by tradition, and the time is not far distant when it will be recognised as such by all who really think.

Dr. Wiley, Chief of the Bureau of Chemistry of the United States Department of Agriculture, said in a recent interview: 'To sustain physical exertion, if you have hard work to do, there is nothing better than starch or sugar. You cannot tire out a Japanese who eats rice. He will draw you all around the town on a pound of rice, and be as fresh at the close of the day as he was when he started. You could not do that on a pound of meat to save your life. The cereal-eating nations

can endure more physical toil than the meat-eating nations. This is not the accepted view, but it is true.'

There is not a doubt but that the enormous consumption of flesh foods by the people of Europe and America is the direct cause of much of the disease, misery, and corruption of these continents. Dr. Haig, of London, in his book on 'Uric Acid a Factor in the Causation of Disease,' maintains that many of the commonest and most distressing of human ailments, such as headache, epilepsy, gout, Bright's disease, diabetes, dyspepsia, mental diseases, anæmia, rheumatism, and the like, are largely caused by the accumulation of uric acid and similar poisons in the tissues of the body through the use of flesh foods. It is well known that tuberculosis and trichinosis are caused by organisms which are introduced into the human body to a large extent through the eating of infected flesh. Although physicians generally are still only in the eat-too-much-meat stage of enlightenment, it is coming to be a common practice with them to forbid or restrict the use of flesh foods in the treatment of such diseases as rheumatism, gout, dyspepsia, Bright's disease, cancer, appendicitis, and diseases of the heart and liver. Flesh foods cause disease by filling the body with toxines, which are ingested with the flesh itself, and produced by the normal decomposition of an over-nitrogenised dietary.

Ptomaine - poisoning, a form of intoxication common among civilised peoples and often pro-

ductive of the most serious consequences, is caused entirely by saprophytic plants growing on dead flesh. These organisms may flourish on the flesh before it is eaten, or even after it has been taken into the body if the digestive chemicals are insufficient in strength or amount to destroy them or prevent their growth. Oysters, clams, and other sea-scavengers, which are eaten raw and swallowed whole, including the contents of the alimentary canal, are especially liable to cause ptomaine-poisoning. If these animals come from regions about the mouths of sewers, where typhoid and other germs are endemic, they are additionally dangerous as food.

At the Battle Creek (Michigan) Sanitarium, the largest and most successful institution of its kind in the world, and in all of the many branches of this institution scattered over the globe, no flesh foods are ever used or prescribed at any time. Dr. J. H. Kellogg, the originator and superintendent of these institutions, deserves to be honoured through all time for his tireless efforts, extending over many years and into many lands, in behalf of more rational and exalted human living.

The wounds of persons living on a fruit and vegetable diet heal more readily, and with far less pain and suppuration, than the wounds of flesh-eaters. This has often been remarked by persons who have changed from a flesh to a non-flesh diet. During the Turco-Grecian War the London and New York papers contained frequent refer-

ences to the wonderful power of the Turkish soldiers of resisting wounds. In the *London Standard* in a dispatch from Constantinople at the time of this war, we find: 'The doctors also remark on the extreme rapidity with which their patients recover from their wounds, and attribute it to the abstemious lives they lead, drinking no wine and eating very little meat, but plenty of vegetables.' A still more remarkable record of recovery from wounds was made more recently by the Japanese during their war with the Russians, due, no doubt, to their simple diet, consisting primarily of rice, and to their habits of frequent bathing.

Captain Sanderson, author of 'Fourteen Years Among the Wild Animals of India,' states that in his expeditions through the jungle he frequently came upon elephants, wild buffaloes, and other vegetable-feeding animals who were suffering from severe wounds inflicted by hunters and other wild beasts. These animals, he says, he generally found to be in apparently good health, notwithstanding their wounds were sometimes rendered extremely loathsome by millions of flies, which they were unable in their crippled condition to drive away. On the other hand, lions, tigers, and other flesh-eating animals, when wounded, even though the wounds were not severe, seldom escaped death because of blood-poisoning, which almost invariably set in. In the later years of his life Captain Sanderson adopted a vegetable diet himself, and he 'was immediately relieved of a chronic

malarial affection that had followed him for years, and which renewed its attacks whenever he ventured into the jungle.'

Whatever theory we may adopt regarding the relation of the mind to the physical organism, we must in any case recognise the fact that mental conditions are to a large extent at least dependent on concomitant physical conditions. If, therefore, a carnivorous diet tends to poison and corrupt the body, it is highly presumptive that it takes a part in the causation of those unclean conditions of the soul from which spring vice, crime, irritability, and drunkenness. Foul tissues, high blood-pressure, and consequent nervousness will drive men to do almost anything that is bestial and iniquitous, and these are just the conditions that a flesh dietary is calculated to induce. And they are, moreover, the very conditions that a plain and simple diet of fruits, grains, and vegetables is adapted to relieve.

At the Battle Creek Sanitarium, and other similar institutions, hundreds of victims of the liquor and tobacco habits have been cured, and the treatment has consisted chiefly in changing the patients to a more simple and wholesome diet. 'It is very rare indeed,' says Dr. Kellogg, 'that the adherence to an unstimulating diet, discarding flesh foods and condiments of all kinds, does not completely obliterate the appetite for either liquor or tobacco.'

No flesh should ever enter the mouth of one who makes it his business to think. This is

especially true of that large army of brain-workers who are compelled to go through life with impaired digestion. Professional thinkers are generally poor digesters. The digestive organs are impoverished by the inordinate demands of the brain. The stomach is neglected, and is likely to be in a state of more or less constant mutiny and demoralization. The diet of Pythagoras, Plutarch, and Buddha, of Shelley and Tolstoy, and of Wagner, Edwin Arnold, and Thoreau, is pre-eminently the diet for clear thinking and high feeling. Meat mires the mind and lays the foundations of senility and decay. *No being will do his most luminous and exalted thinking with his stomach a morgue.*

It is coming to be common knowledge among athletes and physical culturists that flesh food is not what it has been traditionally supposed to be as a diet to train on, and many of the more advanced of them have abandoned it altogether. Mr. Eustace Miles, of Cambridge, well known over England as amateur tennis champion for many years, after a series of careful experiments with all sorts of food, has given up meat entirely as an article of diet. In his 'Muscle, Brain, and Diet,' he shows how by exercise and careful attention to diet he not only freed himself from disease, but improved 50 per cent. in activity both of body and mind.

In Germany, where the movement for diet reform is much more mature than in America, a number of athletic contests have been held, in which exponents of the flesh and the non-flesh diet

have taken part. Some of these contests have grown out of discussions of the food question, and were designed to put to the test the relative merits of the two systems, in so far as a contest in physical endurance would do this. *In every one of these contests the flesh-eaters have been not only defeated, but routed.*

One of these contests was a grand walking match from Berlin to Vienna—361 miles. Fifteen contestants took part, two of them vegetarians. The vegetarians were victorious, the first meat-eater arriving twenty-two hours after the vegetarians had finished the race.

Another similar contest was held at Berlin in 1898. The following account of this contest, under the caption, 'Meat-eaters walked off their Legs,' appeared in the *London Daily News* :

'*Berlin, June 29.*—A very interesting walking match took place here last Sunday over a distance of about seventy English miles. There were twenty-two starters, among them eight vegetarians, and the distance had to be covered in eighteen hours. The interesting result was that the first six to arrive at the goal were vegetarians, the first finishing in fourteen and one-quarter hours, the second in fourteen and one-half hours, the third in fifteen and one-half hours, the fourth in sixteen hours, the fifth in sixteen and one-half hours, and the sixth in seventeen and one-half hours. The other two missed the road, and walked five miles out of the way. All reached the goal in splendid condition. Not till an hour after

the last vegetarian had arrived did the first meat-eater appear, completely exhausted. He was the only meat-eater that made the trip, the others having dropped off after thirty-five miles.'

In 1902 a third walking match was held at Berlin, the distance being from Berlin to Dresden, 125 miles. Thirteen contestants covered the distance in the required time, forty-five hours. Of the thirteen, the champion and nine others were vegetarians. Karl Mann, the champion, made the trip in twenty-seven hours. This was the greatest pedestrian achievement which up to that time had ever been accomplished by man. It beat the famous Greek's run from Marathon to Athens, announcing victory over the Persians. The Greek covered 140 miles in forty-eight hours, averaging a little less than three miles an hour, while Mann averaged almost five miles an hour over a course only fifteen miles shorter.

Mr. C. B. Fry, regarded by many authorities as the greatest all-round athlete England ever produced, says that a diet consisting of cheese, nuts, grains, fruits, and salads, is the ideal diet for athletes, and that if this diet were generally adopted, the fatigue from which the average athlete suffers would be unknown.

A short time ago the *New York Journal* conducted a physical culture competition open to the young men of the United States. The winner of the first prize was a Mr. Weinburgh, who was pronounced by the judges, Robert Fitzsimmons and Watson L. Savage (instructor in physical

culture at Harvard) to be the most perfectly developed young man in America. In opening a series of articles in the *Journal* telling how he acquired his development, Mr. Weinburgh gave the following advice to would-be athletes: 'Eat two meals a day. Avoid tobacco in every form, and drink no intoxicating liquors. Take plenty of baths. Eat plenty of fruit and vegetables. Don't eat meat. Go to bed early, but never sleep over eight or nine hours.' 'Slightly over a year ago,' he added, 'I was a rheumatic cripple, far weaker than the average boy. I became well and strong because I followed these rules and devoted as much time as I could spare to exercises tending to loosen up my stiffened joints.'

Gustave Jordin, a Swede, recently attracted wide attention by paddling a canoe from Stockholm to Paris, where he arrived in robust condition. He lived during the journey on bread, milk, apples, and water, and performed the feat simply to show what a man can do on the natural diet.

A marvellous lifting feat was performed a few months ago by Mr. Gilman Low, a New York athlete, who succeeded in lifting more than 1,000,000 pounds in fifty-five minutes. The feat was accomplished with a scale arrangement allowing the use of the muscles of the arms, legs, and back. Each lift raised 1,000 pounds, and Mr. Low lifted 1,006 times, making a total of 1,006,000 pounds. During the test he lost $5\frac{3}{4}$ pounds in weight, but finished without distress or exhaustion. Mr. Low had previously attempted this

same feat and failed, ending at the half-million mark in great exhaustion and dizziness. He attributes his remarkable endurance in his recent feat to his careful and abstemious diet during the two months of his preparatory training. During the first five weeks of training he ate only one meal a day, consisting of three eggs, whole-wheat bread, fruit, cereals, and nuts, and a glass of milk after each meal. The last three weeks he ate only four meals a week, consisting of the same menu as that of the previous five weeks.

Mr. George Allen, of England, a few years ago walked 100 miles in a little over twenty hours. He says: 'I did not undertake this walk with the idea of making a record, but to demonstrate the efficiency of a non-flesh diet. I think I can lay claim to having accomplished one of the greatest walking feats, if not the greatest, that has ever been performed upon the highroad, and this upon a diet which is generally regarded by misguided athletes to be totally insufficient to maintain strength.' Mr. Allen ate during his 100-mile trip 2 melons, $\frac{1}{4}$ pound of grapes, 2 bromose tablets, $\frac{1}{4}$ pound of protose, $\frac{1}{4}$ pound of whole-wheat wafers, $1\frac{1}{2}$ pounds of pears, 2 cups of cocoa, and $1\frac{1}{2}$ cups of water.

Mr. Allen has just recently added another to his long list of pedestrian triumphs by walking from Land's End, the southernmost point of England, to John o' Groats, the northernmost point of Scotland, a distance of 909 miles, in 16 days 21 hours 33 minutes, which beats any previous record by $7\frac{1}{4}$ days. The average for

the last week of the walk was 63 miles a day, the last day's walk being $72\frac{1}{2}$ miles. Mr. Allen has been a strict vegetarian and natural-life advocate for a number of years.

Miss Rosa Symons, the well-known long-distance vegetarian cyclist of England, recently rode from Marble Arch, London, to Land's End, thence to John o' Groats, and back to Marble Arch, a distance of 1,860 miles, in 14 days 8 hours 10 minutes, averaging 130 miles a day during the entire journey of two weeks.

Mr. Miller, the well-known ex-cycling champion of America, never touched flesh food during his training, nor while he was making his marvellous rides, his trainer being a vegetarian.

Mr. Walker, who has won the 100-mile championship of the Yorkshire Cycling Club of England three times, is a lifelong vegetarian, and has won twenty-two prominent prizes.

Kurt Pfleiderer and Erich Newman, two English boys, fourteen and fifteen years of age respectively, and neither of whom ever tasted flesh food, have ridden 100 miles on their wheels in $6\frac{1}{2}$ hours.

Mr. T. H. S. Young, another English cyclist, has ridden 100 miles in 5 hours 23 minutes.

Mr. H. H. Agnew, a member of the London Vegetarian Cycling Club, has ridden, unpaced, 196 miles in 12 hours and 100 miles in 5 hours 22 minutes; and Mr. F. Newell, another member of this club, has cycled 335 miles in 24 hours and 198 miles in 12 hours.

Mr. Olley, also a member of the London

Vegetarian Cycling Club, at the age of eighteen rode from London to Portsmouth and back, 143 miles, in 8 hours 31 minutes. He averaged nearly 17 miles an hour, and never stopped nor dismounted during the entire trip.

In 1905 Mr. Olley put a crown of glory on his cycling achievements by riding from one end of the island of Great Britain to the other, over a track 860 miles long, in the almost incredibly short time of 3 days 20 hours 15 minutes, shortening the record no less than 11 hours 10 minutes. He averaged 220 miles a day, or 9.3 miles an hour, inclusive of stops.

Mr. G. A. Olley has just succeeded in establishing a 1,000 miles unpaced record on an out-and-home course in 4 days 9 hours 3 minutes. He was in bed but five hours during the four days, and not at all for the last fifty hours, but took a few ten-minute rests by the roadside.

It is said that the London Vegetarian Cycling Club, in spite of its small numerical racing strength, has much more brilliant achievements to its credit than other similar organisations in Great Britain.

It has been only two or three generations since it was believed, not merely by the masses of men, but by physicians, that in order for the human machine to be strong and healthy it was necessary for a certain amount of alcohol to enter into the daily intake of every human being. It is now known that alcohol is not only not necessary to human life, but is even incompatible with the highest physical efficiency and well-being. And the time is bound

to come when that which is known and recognised by the few will be known and recognised by the many—that the accursed old horror of flesh-eating is also nothing but a tradition, and that it is not only not necessary to the highest human perfection, but in every way actually antagonistic to it.

The world is growing. We live in a time of wonderful metamorphosis. The humanitarian is not so lonely and peculiar as he once was. Thirteen years! That is not long—not very long even in the fleeting dream of human life—and yet in the last thirteen years what growth there has been in humanitarian sentiment among the élite peoples of the earth! Just thirteen years ago the writer of these lines came to the great city in which he now lives from the prairies, with the suspicion which has at last grown into two books, and went around *trying to find out* whether there were any people in the University here or in the world who *lived* the ideas that were just then sprouting doubtfully in his consciousness. How sad and lonely, and how full of trembling and bewilderment, those days seem now! And how cold and blind and inhospitable the professorial coxcombs here in this great seat of learning were, as they are still to-day, to these new but blessed ideas!

The most nearly 'civilised' peoples of the world are prevailingly flesh-eaters, and this fact has been cited as evidence that flesh foods are essential to the development of the highest human civilisation.

But this very same claim has been made for

alcohol, and for Christianity, and even for tobacco, and for human slavery.

It is often the case that the very thing picked out by the superficial or vicious as an important cause of a given effect has had nothing whatever to do in bringing it about. The simple fact that two things exist together is in itself an insufficient reason, and may, indeed, be the poorest kind of a reason, for supposing that one of them has caused the other, or even that they have both been produced by the same cause. Facts may be simultaneous in origin, may associate during their entire existence, and even disappear together at the same instant of time, and yet be the result of wholly independent causes. This is especially the case in social phenomena. An effect as complex as that of a civilisation has necessarily many causes. These causes are so braided together, and are often so obscure, that it is difficult or quite impossible for even the sociologist to make heads or tails of them.

It is doubtful whether alcohol, tobacco, flesh foods, or Christianity have, any of them, unless possibly the last, contributed on the whole anything of an affirmative character to the development of what we call modern civilisation. Civilisation, we know, has achieved many of its most signal triumphs in direct opposition to their general influences. It is, anyway, about as certain as can be that the invention of the steam engine, and especially of movable types, together with the improvements that grew out of these

two inventions—the steamboat, railroad, factory, newspaper, telegraph, telephone, electric motor, etc.—have exerted an incalculably greater influence on the development of human enlightenment and civilisation than all of the above-mentioned causes put together.

But if the civilisations of Europe and America are to be accredited to flesh-eating, how are we to account for the physical, mental, and moral superiority of that smattering of individuals in these civilisations who do not eat flesh? And to what are we to attribute the degradation of such incomparable carnivores as the Eskimos, the Fuegians, the South Sea cannibals, and the hundreds of other races of debased savages scattered over the planet?

Spain is the most religious and the least civilised of all the European nations. Is Spain religious because it is so little civilised, or is it so little civilised because it is so religious? *Both*, to a certain extent, *but neither primarily*. Both are products of the underlying Spanish psychology. And what Spain needs more than less religion, free institutions, and fertile lands, is *different-shaped heads*, a different brain-architecture; then all of these other things will follow. Is it not Anglo-Saxon brains that make America prosperous and immortal *north* of the Rio Grande, and the absence of Anglo-Saxon thinking matter that makes everything so different *south* of it? Civilisation and progress are primarily matters of race temperament.

CHAPTER IX

THE PERIL OF OVER-POPULATION

It has been claimed that it is through violence that man is able to maintain himself in the world, and that if he were altruistic toward other races the earth would be overrun by them, and human existence thereby endangered, if not actually destroyed.

Nothing thus far said, nor anything that may be said hereafter, is to be understood as favouring in any way the surrender by man of his rulership of the earth. Man is a dismal specimen to be at the head of a world. There is no doubt about that. He is not so bad when he is compared with something that is a great deal worse. Nothing ever is. But if we had an ideal world rolling beside ours for a while, or a world ideal to the extent of having a physically, mentally, and morally perfect race of beings at the head of it, even fools would have difficulty in failing to feel our fearful inferiority in comparison.

If a new race of beings could be introduced here from without; a race with new minds and better impulses and new and improved points of view; a

race of beings more powerful than men, more beautiful, more honourable and Godlike; a divine race that would accept an interest in the craven races of the earth, would lead and love them and lift them up into hopes and aspirations incomparably beyond anything now on the earth, why, of course, it would be a great thing for the planet, and would justify the resignation of man as manager of the world, and the subordination of him and the other races of the earth to this new race.

Man is an animal with great possibilities of improvement. And if he could only have the tutorship for a while of somebody who would make things plain to him, somebody who would make him ashamed of himself, and would show him what wonderful opportunities there are open to him if he would only use them, he would blossom out as he has never been able to do hitherto. It is the necessity we live under of having to plug along alone, and of being compelled to find things out by the expensive and painful method of stumbling over them, that makes human progress so precarious and slow. If we could only get into communication with the inhabitants of some of the neighbouring worlds about us, and could see what they look like and how they live and do, it would help somewhat. Even if these beings were no higher in development than we are, they would be *different*, in all probability, from what we are, and this fact would be beneficial to minds as leaden and mechanical as ours are.

But the introduction here of another race from without, or even the touching of antennæ with the beings on neighbouring spheres, if there *are* beings on these spheres, seems now impossible. Maybe it isn't, though. Maybe we shall some time speak to the civilisations of the stars. Things as improbable as this have already taken place several times here on the earth. But to our understanding in its present state it looks impossible. So far as we know now, the inhabitants of this world and their children have got to work out for themselves their own salvation. I am sure we are in the morning of big things, and that this world of ours is about to experience an expansion of feeling and understanding without any parallel in the things that have gone before.

Man is the legitimate ruler of the earth, not because he is an ideal ruler, but because he is the best there is. He is the most talented of all animals on the earth, and is blessed with by far the strongest appetite for improvement. And these qualities of superiority entitle him to leadership, regardless of his anatomical and temperamental limitations.

The question is not, Shall man be master of the earth? but, What sort of a master shall he be? Shall he be cruel and selfish, bigoted and imperialistic, thinking only of himself and sacrificing the interests of others to his own heartless purposes? or shall he be the responsible administrator of the universe, presiding over the affairs of the earth honourably and equitably, with a mind

single to the good of all? Shall he be a savage despot or a schoolmaster? a feared and hated monster, or a wise, patient, and affectionate father? Since he has become the manager of the planet, shall he manage it as he would wish it to be managed if *he* were a subordinate and some other race had succeeded to the superintendency, or shall he cut loose from all moral obligations, ignore the promptings of his better self, and run things absolutely in the interest of himself? Which shall it be—the *great law of love* or the *savage law of might*?

Man is a very different being from the standpoint of other races from what he appears to be when inspected by himself. He comes about as near exemplifying the law of the savage in his dealings with other races as he would likely exemplify it if he looked upon this law as the ideal standard of conduct. His hand is a great red claw dripping with the heart-drops of whole races of exterminated beings. *There is scarcely a species of beings on the face of the earth to whom man is a being to be loved and admired, and to most species he is a perfect monster, with blood as cold and heart as insensate as a slimy saurian's.* This is a terrible thing to say, but, oh! the most awful thing about it is *it is true*. From the time he achieved ascendancy over his fellow-beings thousands of years ago, man has dominated them with almost incredible selfishness and ferocity. Species after species has been swept out of existence, and thousands of other species have been reduced to mere skeletons. No race has ever

been too beautiful, too innocent, or too sensitive, to escape the rapacities of this unfeeling fiend.

In a world like this, where there are so many primitive races of beings—races whose ways of acting have been imparted to them by a militant method of development, and whose careers have not included opportunities for the acquisition of facilities for rational processes—it is often necessary for man to use harsh measures in order to maintain himself, just as it is often necessary, and for exactly the same reasons, for the better parts of human society to employ measures, hard in themselves, in protecting themselves against the vicious and irrational portions.

Many races, owing to the manner in which life has been evolved, are by nature criminal, just like a lot of individual men and women. Their existence is a continual menace to the peace and well-being of the world. The fullness of their lives is dependent upon the emptiness and destruction of others. The mosquito and the tiger, the rattlesnake and the 'sportsman,' are criminals of this kind. The same thing is true of predatory animals generally.

These criminal races should be dealt with in the same way as individual criminals among men. But since man, in the treatment of his delinquent fellow-men, is still a savage, he cannot be expected to deal in an enlightened manner with non-human delinquents—at least, until he comes to regard even the best of them as being something more than commodities.

Delinquents, whether human or non-human, individuals or races, act as they act just as inevitably as a loosened stone rolls down a mountain-side or a hollow tooth aches. If they are punished or extinguished, the punishment or extinction should be imposed with regret, not in a spirit of revenge. It should be administered in such a way as to minimise it—that is, so as to make it go as far as possible compatible with the interests of social welfare. We, we must remember, if we had started at the same place and travelled the same road, would have arrived at the same place as those who err. Moral deformity is just as inevitable as mental and physical deformity, and when we get far enough along to analyse conduct and to realise the true nature of waywardness, we shall *pity the criminal*, whether insect or man, just as we now pity the imbecile and the cripple.

The function of punishment is to do good, to improve the universe, to add to the sum total of happiness. And punishment which does not do this is not justified. It is a crime in itself. The penal acts of society should be judged just as other acts of conduct are judged—*by their utilities*. Whether it is right or wrong, proper or improper, whether it is the thing to do or the thing not to do, to pull a tooth or cut off a hand, depends on whether the individual to whom the part belongs is benefited or not. And whether or not it is right to amputate an individual or a race, a human being or a mosquito, depends on what kind of

service the act performs for the universe as a whole, including the part cut off.

The great trouble is that individuals and races in their treatment of each other are not guided by the same high standards of impartiality as an individual organism in dealing with his own organs and parts. Life is not one. It lacks unity of feeling and purpose. And as long as it lacks this oneness it will lack justice.

Non-human delinquents raise no new problems in criminology in addition to those already raised by delinquent individuals, classes, and tribes among men. The seemingly new difficulties arising from the extension of the ethical system of man so as to include all terrestrial beings are the same old difficulties we have always had to deal with. They are simply amplified; that is all. These difficulties are to be removed, like all other difficulties, not by sitting down and blubbering over them, nor by taking to our heels, but by going right up to them and focusing on them our best thought and effort. But whatever *violence* is deemed necessary, it *must* be administered with *feeling* and *economy*. This must be insisted upon over and over and over. The great surgeons of our civilisations must be *humane* men—men of real feeling and sympathy for this afflicted world, and who do their work with a clear understanding of its full meaning and effects—*not savages* who do what they do because they like to cut and kill.

But most of the wrongs inflicted by man on non-human beings are not inflicted on criminals

nor in self-defence, but simply to serve certain imperfections in human nature that are catered to by the killing and torturing of other beings. Men are not zoophilists (being-lovers). Not many of them are philanthropists (man-lovers). They are *barbarians*. And the wrongs inflicted by them on non-human beings are for the most part inflicted simply because they feel like it. Human nature is so constructed that men get pleasure out of doing the most monstrous deeds. It is worse than this. Human nature is so constructed that it contains elements which *demand exercise*, demand motor expression, and in whose expression the most lamentable and appalling effects are produced.

Men do not maul horses to keep from being crowded off the earth, nor shoot song-birds because they are afraid they will become too numerous. They do not go away into the northern snows and slaughter seals and elks and musk-oxen because these creatures threaten to overrun civilisation. They do not sterilise the seas to protect the continents from invasion, nor kill cows and sheep to keep down their numbers. The multiplication of the domestic animals is absolutely under human control. The 20,000 deer murdered in the Maine woods during the season of 1905, the 12,000 shot down in one district of Canada alone (Muskoka) during the same time, and the 12,000 killed in Michigan, were not slain by man in self-defence.

The Spanish bull-fights, in which 3,000 bulls

and 5,000 horses are every year killed in the most revolting manner, cost the Spanish people \$5,000,000 annually, which is more than three times the amount paid for education. And all of this expense and tragedy are simply for the purpose of satisfying the savage cravings of the Spanish palate for blood, and nothing else. Poor old Spain! Too weak and cowardly to war on men, she turns in her decrepitude upon poor unarmed bulls!

If man acted unkindly toward non-human beings only when he had to do so in order to avoid harm to himself—if *he were as economical in his injuries to others as he would be if he had to endure them himself*—the violence which to-day marks his dominion of the planet would be reduced to a mere vestige of what it is. Non-human races are not so injurious to man as they are generally supposed to be. Most of the large carnivora are already dead. Even the insects are largely beneficial. About one-half of the 300 families of insects known to entomologists are beneficial to man in one way or another—as destroyers of noxious plants and harmful insects, as scavengers and soil-makers, as pollenisers of plants, and as producers of materials used in the arts and in the manufacture of clothing.

But there is really no use in talking and talking about these things. What is the use of pretending that men who fill the earth with pain and ravishment are honest and sincere and zoophilic, when they know themselves and every-

body else knows that they are not? The men who commit these crimes know, and they ought to know that those who are enlightened enough to condemn their doings know also, that the explanations offered by them for their deeds are *not reasons*, but *excuses*. The explanations are *afterthoughts*, *not forethoughts*. They are what occur to the authors of these crimes to say when they are called to taw about them, not a confession of the motives which prompted the acts in the first place. No being ever started out to kill and eat other beings from motives of benevolence. Yet this is the explanation palmed off by a large number of people for some of the most cold-blooded crimes ever committed. Many men have become so specialised in their zeal to increase the number of beings who may be privileged to taste existence on this globe that they eat a menagerie at a meal.

When men start out to conceal their guilt by specious excuses, it is necessary, in order that the enterprise may be a complete success, that they avoid overestimating the ignorance of their accusers.

It would seem that fishing and hunting for pastime were so plainly infernal as to arouse abhorrence in anyone with only the ordinary allowances of common sense and humanity.

‘The quaint old cruel coxcomb in his gullet
Should have a hook and a small trout to pull it,’

said Byron of that lazy old barbarian, Izaak Walton. And so say I of every one who wantonly

wounds the sensitive lips of a fish. In a more equitable world, a man whose understanding were so weak as to cause him to waste his days snooking about watersides with a hook and a dying worm, inducing fishes to get caught just for the amusement afforded to his savage nature of seeing them struggle to get away, would have a big iron hook caught into his own lips or throat or abdomen, and jerked around for awhile so that he could get some idea, even with his own rude implements of realisation, of how such things feel.

The drag-hunt furnishes exactly the same chance for exercise as hare-hunting and stag-chasing and fox-hunting, and is without the brutalities of these old blood sports. Exploration and photography are other civilised substitutes for the pastimes of killing that have come down to us. The camera is a glorified gun. A being that would not rather take the pictures of those around him than take their lives is less man than tiger.

It is impossible for me to express my loathing and horror of the practice men have of killing things for pastime, so-called 'hunting,' or 'sport.' No one but a barbarian can engage in such pursuits, or can look upon them or know of them without pain and indignation. It makes me want to fight and cry whenever I think of them. And when I see men engaged in such execrable activities (the crippling, killing, and terrifying of whole communities of innocent and happy beings, shooting them down in cold blood, and with hellish enthusiasm), my feeling is *that I must stop them at*

all hazards. And there have been times, when I have come upon men engaged in these fiendish doings, when I would have shot them down if I had been armed, the enormity of their crimes has come over me with such vividness and power.

Vacation days may be much more beautifully spent communing with the transcendent spirit of Nature than in the butchery and terrorisation of her simple-hearted children.

Oh, Nature, how I love thee! How my heart longs for thy calm and fragrant haunts, and how I bleed to see thy children fall before the shameless glance of thy ravisher! Oh, Rock Creek! stream that flowed through the Eden of my boyhood! with thy murmurings and thy pools, thy pretty fishes, thy cool and solemn groves, thy old High Bank, thy golden dreams, thy flowery vales, and thy green hills rolling away! How many times, back there in the vanished years, have I seen thy hallowed banks reddened by the ruffian's dastard deeds!

Here is a silhouette of an English 'hunt,' sketched by an ex-sportswoman, Lady Florence Dixie: 'What is it but deliberate massacre when thousands and tens of thousands of tame, hand-reared creatures are every year literally driven into the jaws of death and mown down in a peculiarly brutal manner? A perfect roar of guns fills the air; louder tap and yell the beaters, while above the din can be heard the heart-rending cries of wounded hares and rabbits, some of which can be seen dragging themselves away, with legs

broken, or turning round and round in their agony before they die! And the pheasants! They are on every side, some rising, some dropping; some lying dead, but the great majority fluttering on the ground wounded; some with both legs broken and a wing; some with both wings broken and a leg; others merely winged, running to hide; others mortally wounded, gasping out their last breath amidst the hellish uproar which surrounds them. And this is called "sport"!

There is one thing I long for more than anything else in this world, and that is to be omnipotent for about ten or fifteen minutes. I believe in this time, with no better thinking apparatus than the very defective thing to which I am now restricted, I could effect more in the way of real amelioration on the earth and throughout the solar system generally than the traditional superintendent has accomplished in the last ten million years. This may seem irreverent, but I am really indifferent about how it seems. The commendation of the noodles of the present day, multitudes though they are, is far less important to me than the approval of the future, and is nothing compared with the consciousness of having intimated a much-needed truth. When I get to thinking about the condition of things in this world sometimes, I am free to say that I become so volcanic and intense that I feel as if I would have to buy a bomb in order to express myself.

Go out, my brother, to the wilderness—out to

the virgin loveliness of untouched Nature, where sodden man has not yet littered the wilds with his 'improvements'; loiter along winding streams and watch the shadows sleeping in the quivering pools, and the water-birds splashing up and sailing away out of sight; see the blossoms opening their bright petals to the sun, and pouring out their sweetness into the radiant airs (the cowslip, the violet, the wild rose, and all that darling array that makes Nature so incomparably fair in the spring); listen to the bees on the sweet-scented willows, the tinkle of distant bells, the love-song of the cat-bird in the thicket, and the sad sweet longing of the dove; lie down on the bank in the sun and listen to the low music of the waters and the footsteps of the breeze on the tree-tops; and beyond, through the rifts of drowsy greenery, see the beautiful blue sky, oh, how beautiful and blue, with its silvery fleets sailing silently out of the west!—and *then*, if you honestly feel like *killing* something, feel as if you must become the author of an ill-smelling carcass of some kind, go home, my brother, as straight-way as you can, and hang yourself by the neck until dead.

What is more beautiful to a being of culture than the smile of a sun-kissed landscape; more majestic than mountains; more grand than the roar of the sea; more blessed than the wind in the trees moaning responses to the secret sighings of the soul; more wonderful than the tints of the lily; more sweet than solitude or the larks going

to bed on the prairies; more exquisite than evening, when the plum thicket sweetens the stillness and the sunset paints the west; more awful than the infinite of night; more dreamy than the crescendo of lapping waves or the water-dance of the moon; more mournful than the dying reproach of a murdered deer? And yet all these things are unperceived by the hunter in his blind, brainless, all-consuming madness for blood.

The wild rose is the flower of heaven, the sweetest and loveliest of all the radiant blossoms that spread their charms in this world; yet to the tiger who ranges the wilds in search of 'game' it does not even exist. Oh, forest! world of beauty and mystery, of music and meditation, of poetry and dreams! days long I lose myself in thy blessed depths, without ever becoming tired of thy sweet whisperings. Yet to that ungaoled felon the 'sportsman' this leafy paradise is but a place where he can get a chance to take the life of something.

Oh, the wild flowers, and the forest, and the lonelinesses, and the beautiful birds! How I shall hate to leave them when I go back to the dusts!

Oh, days of May! days of the soft south wind! days when the soul grows ardent, and violets' dreams come true! Oh, that life were a thousand years of thee, blue, voluptuous May!

No fantastic or impossible scheme of human conduct is for one moment contemplated in these pages. Man is not advised to sit down and fold

his hands and roll his eyes piously toward the traditional source of good, and allow himself to be eaten up by tigers and ticks. And no one who reads honestly what has gone before can come to any such conclusion. Anything can be misrepresented if the one who attempts it is ingenious and determined enough. It is recognised that this is not an ideal world, and that it is impossible for any being to act among the evil as he would be able to act among the good. It is simply insisted that man shall ignore the urgings of his lower nature and do the best he can in the circumstances. Men do not and cannot act ideally toward their fellow-*men*, but they think they act nobly when they do the best they can. And, oh, if man would *only try* to be just to his fellow-races, what a different world he could make of it! If one is disposed to be wayward, it is astonishing what an array of excuses even the simpleton can scrape up in defence of himself. But if one is resolved on that higher life, ever held up to us by the better elements of our nature, it is also surprising how successful one can be, even among adverse conditions.

CHAPTER X

THE SURVIVAL OF THE STRENUOUS

It has been said that the New Ethics is opposed to the 'strenuous life' everywhere held up to us by Nature. The hawk exploits the sparrow and the sparrow engulfs the gnat; therefore, man should exemplify the same law.

This is the argument. It is the argument of people who can't think. I say 'people who can't think,' because people with normal understandings and reasonable intellectual enterprise would discover the fallacy of such an argument themselves without having to have somebody else point it out to them.

In the first place, Nature is not model, not perfect nor ideal, as it is assumed to be by those who make this objection. That great, perfect, all-beneficent Nature, that never had a blemish nor made a mistake, or if it did make a mistake the mistake was supposed to be some particularly profound act whose goodness eluded the understandings of men—*this* Nature, the masterpiece of an all-wise mind, the Nature of the pre-Darwinians,

has about passed away. And in its place we have an evolved and evolving Nature, very imperfect, some parts of it especially. Among the imperfect parts may be mentioned the incompetents who are not able to recognise imperfections when they meet them in their own minds.

Nature is the universe, including ourselves. And are we not all the time tinkering at the universe, especially the garden patch that is next to us—the earth? Every time we dig a ditch or plant a field, dam a river or build a town, form a government or gut a mountain, slay a forest or form a new resolution, or do anything else almost, do we not change and reform Nature, make it over again and make it more acceptable than it was before? Have we not been working hard for thousands of years, and do our poor hearts not almost faint sometimes when we think how far, far away the millennium still is after all our efforts, and how long our little graves will have been forgotten when that blessed time gets here?

How about the polar regions? Wouldn't it have been an improvement if these vast and uninhabitable expanses of snow and ice, which are now of no use except in sustaining a few white bears and snow-buntings, and refrigerating an occasional fool who happens to freeze to death up there trying to get to the pole, had had a fertile soil and a mild climate and been fit for human settlement? And are there not other parts of the earth that are too hot, at least at certain seasons of the year, to be regarded as having anything like

an ideal climate—Death Valley and the desert of Sahara, for instance? And are there not still other portions that are useless because of a lack of water? and others, again, where the inhabitants are alternately parched and drowned?

How about the land and water? Are these distributed so as to be best suited for commercial and other purposes? Have we all the natural harbours we want, already dredged, and all the internal waterways we need or that will be needed to the end of time? And isn't three-fourths of the surface of the earth a good deal to devote to water, in view of the fact that nobody higher than fishes and whales can live there? Wouldn't it be an improvement if Asia and the Pacific Ocean were mixed up a little more, so as not to have such congestions of land and of water, both largely useless? Isn't there too much land in the Northern Hemisphere, considering the great deserts that are caused by this over-terrestrialisation, and considering also the vast expanses of landless surface in desirable latitudes in the Southern Hemisphere going to waste?

Is human nature perfect? Do we do as we would be done by? Is it not ideal in most instances to do so? Is human eyesight unfailing? and human hearing? and human strength? and human understanding? and human affection? Wouldn't it be a convenience to have eyes in the back of our heads? and facilities for breathing under water? and stomachs that could get the carbon and hydrogen for human nutrition as

effortlessly as the lungs get oxygen? Is any one so prosy that he wouldn't want wings if he could get them, or the privilege of choosing his appearances if he only had the chance?

Take the donkey. The donkey brays. But wouldn't it have been more satisfactory to all those who have ears to hear and sensoriums to look after if the donkey had been provided with a laryngeal apparatus that would enable it to express the overflow of its yearnings in song? Would it have been better or would it have been worse if the liver-fluke had been left out of the world—that parasitic flat-worm residing in the bile-sac of the sheep, and causing sometimes as many as 3,000,000 sheep to perish miserably in a year in Great Britain alone? Couldn't we get along without tapeworms, and rattlesnakes, and fleas, and the appetite for alcohol? How about weeds, and diseases, and slush, and microbes, and famines, and fogs, and floods, and hurricanes, and earthquakes, and mosquitoes, and dust, and fools, and near-fools, and death?

Of all the silly notions foisted upon us by a know-nothing past, the notion that Nature is immaculate and ideal, perfect and all-wise, certainly takes the cake for downright absurdity. Men attempt to whitewash every old barbarity almost by appealing to what they call 'Nature,' as if whatever Nature is or does is all right, whether it is or not. Whenever these individuals get into a tight place in a discussion, or feel that they would like to allow their not very athletic reasoning

faculties a rest, away they go to Nature (or the Bible); then everything is settled so far as they are concerned. They can always find something in the infinite diversity of Nature to suit every case, especially if they have a knack for ignoring essentials and are handy in the use of allegory.

But *we* are a part of Nature, we human beings, just as truly a part of the universe of things as the insect or the sea. And are we not as much entitled to be considered in the selection of a model as the part 'red in tooth and claw'? At the feet of the tiger is a good place to study the dentition of the cat family, but it is a poor place to learn ethics.

In the ideal universe the life and happiness of no being are contingent on the suffering and death of any other, and the fact that in this world of ours life and happiness have been and are to-day so commonly maintained by the infliction of misery and death by some beings on others is the most painful fact that ever entered an enlightened mind.

But in many parts of the life process of the earth the tendency of evolution is decidedly away from this deplorable condition toward one in which the interests and lives of all are more and more considered. The raw primordial impulses—those hateful propensities found everywhere in the breasts of earth's creatures, driving them to discord and crime—are slowly weakening and being superseded to a larger and larger extent by sympathy and reason; and in so far as altruism

takes part in determining conduct, just to that extent does strenuousness, as represented by strife among beings themselves, cease. There may still be strenuousness toward the inanimate world, but this is not the strenuousness discussed here. The 'strenuous life' as opposed to the sympathetic life means opposition to the souls and bodies of other beings, not opposition to rocks and rivers and winds and waves, which is legitimate strenuousness.

The growth of morality is the growth of a tendency in opposition to and away from the 'strenuous life.' It is a tendency toward peace, harmony, co-operation, and reciprocity. What do we mean by ethical progress? The growth of altruism, the growth of consideration for others—nothing more. Negatively considered, it means abstinence from harm to others, but in its higher and more affirmative aspects it means benevolence and love. Courtesy, kindness, justice, humanity—all of these things that belong to what we think of as the moral life—what are they, and what do they mean? They are the qualities exemplified by those who put themselves in the place of others, who recognise the reality and importance of others, and who act toward others as they themselves would like to have others act toward them. Every moral precept, from *The Great Law* down, is a formulation in the interests of the *survival of all*. If there had never been any departure from the survival of the strenuous, there never would have been any evolution of ethics, and civilised

men would be still living, like true barbarians, eating their grandfathers and grandmothers in the jungle.

It has been argued that, if ethical relations are extended by man to other animals, he should extend these same relations to plants also. Plants are organisms—they live and die—and to kill a cabbage or an onion is to take life as truly as to kill a bird.

The defect in this argument is that it assumes that the basis of ethics is life, whereas ethics is concerned, *not* with *life*, but with *consciousness*. The question ever asked by ethics is *not*, Does the thing *live*? but, Does it *feel*? It is impossible to do right and wrong to that which is incapable of sentient experience. *Ethics arises with consciousness and is coextensive with it.* We have no ethical relation to the clod, the molecule, or the scale sloughed off from our skin on the back of our hand, because the clod, the molecule, and the scale have no feeling, no soul, no anything rendering them capable of being affected by us. And the same thing is true of the cabbage, and the onion, and of plants generally. The fact that a thing is an organism, that it has organisation, has in itself no more ethical significance than the fact that it has symmetry, or redness, or weight.

This is not original. It is not something new—the setting up of a new criterion of ethics. It is simply our ordinary conceptions of right and wrong—the conceptions which underlie all utilitarianism, and which are always present in the

mind whenever judgment is made by us on the everyday acts of men. In this book it is not urged that a new standard of right and wrong be created—*simply that the standards adopted by men for use among themselves be extended and applied wherever they are logically applicable.*

But there is no evidence that any such application would include plants. The fact that plants display intelligence by adapting their acts to ends is no evidence whatever that they are conscious. If intelligence be defined as the adjustment of acts to ends, then a large part of terrestrial intelligence—the most of it, in fact—is unconscious and mechanical. All the phenomena of reflex action are of this character. The beating of the heart, the circulation of the blood, breathing for the most part, the repairing of wounds and fractures, the peristalsis of the stomach and intestines, the digestion of food, the sorting out of the nutritious portions of the food by the villi, the delivery of messages by the nerves, the absorption of oxygen by the lungs, the manufacture of gall and glycogen by the liver, the secretion of mucus and saliva by the cells of the mouth, and of tears by the cells of the eyelids, and the excretion of urea by the kidneys—all of these things, and hundreds of others, which take place continually in the bodies of men and other animals, are as involuntary and mechanical as the circulation of sap in the oleander. Just where consciousness sets in, either in the individual or in the zoological process as a whole, it is at this time impossible to say; but its genesis is no

more mysterious in the one case than in the other.

There is one being, and only one, that is *known* by each conscious being to be conscious, and that is *himself*. The conscious existence of any other being is purely a matter of inference. It is impossible for any mind to become aware of the existence of any other mind by direct perception. We cannot see, or hear, or taste, or feel, or in any other way *realise*, the conscious states of another. We can only *infer* their existence, just as we infer there was at one time on the earth a brute by the name of Bonaparte. We can picture to ourselves the kind of ideas and feelings we think another being may have, and how intense or vague or malicious we suppose they may be, but there is no way of ascertaining just how accurately our representations of them coincide with the actual feelings and ideas.

This ignorance of the conscious states of others applies to the members of our own household, as well as to the forms of life geographically or anatomically remote from us. We infer that other men are conscious like ourselves because they resemble us in certain physical particulars—in shape, structure, behaviour, etc. In ourselves we know consciousness to be associated with certain very definite physical phenomena. We notice that other men have the same kind of body, the same nervous structure, the same looks, and the same general ways of acting and reacting as we have. And we infer that at the back of their series

of physical phenomena, which we perceive with our senses, is a series of psychical phenomena similar to that which accompanies our own physical phenomena. The system of signs and sounds called language, especially if these correspond with the system of signs and sounds in use by ourselves, is of great assistance to us in approximating the states of another.

We infer the consciousness of a dog or an insect in the same way as we infer the consciousness of a savage or of a member of our own family. The more organisms come to differ from ourselves in form and structure and in modes of life and expression, the less able we are to infer their psychic resemblance to ourselves.

Now, animals—all of the vertebrates, anyway, and many of the invertebrates—are so similar to men in their organisation and in their general nervous make-up and modes of life and expression that we are compelled to suppose that they possess, in an ever-diminishing intensity as we go downward in the zoological scale, a conscious existence similar to our own.

In plants, however, there is an almost total absence of the evidence relied on to prove consciousness in animals. The evidence is even scarcer and less convincing in the higher plants than in the lower. Plants are wholly devoid of a nervous system. And this is an exceedingly important fact, considering the close connexion of consciousness and nerve matter in animals. They are devoid of sense organs, and seem to have evolved

along an entirely different line from animals. It may well be doubted whether the simplest animals, like the sponge, the coral, and the one-celled forms, have anything corresponding to what we know or think of as sentiency. Yet many of these lowest of the animals—the paramæcia, for instance—furnish incomparably stronger evidence of sentiency than even the highest plants, as the willow or oak.

But if anyone *does* really believe that plants are sentient or conscious, such individual is not thereby released from ethical obligations to them; *much less* is he licensed by this fact to restrict his altruism to the single species of animals to which he himself belongs, or to some favourite fraction of this species, as the authors of this objection are usually so prompt in assuming. If anyone is convinced that plants suffer and enjoy as a result of his conduct toward them, then if he is civilised he will act toward them as if they *do* suffer and enjoy, *not* as if they *do not*.

I have yet to find a person who, when the logical consequences of this objection were made plain to him, did not immediately lose interest in it, and who did not demonstrate before he got through, that he raised the objection, not because of any solicitude for the suffering plants, but on account of a not-very-well-thought-out desire to perplex somebody.

It would be impossible within the limits of a single volume, or of a single lifetime, to take up all of the objections honestly urged against any proposition. And when to the difficulties of

honest scepticism are added the quibbles of the insincere, there is an array of antagonistic stuff vast enough to dismay the very gods. Many of the objections to the New Ethics have been dealt with in my book on 'The Universal Kinship'; others would better wait to be disposed of by the practical application of the doctrine; and still others, many of them, are not worth the ammunition required to blow their brains out. Many of the objections made by men when they are summoned to a higher ideal of life are, as has already been said, mere ruses and inventions. They are generally so awkwardly veiled as to be readily recognised as such. They are not the candid doubts of the humanitarian, anxious and willing to advance if he can only find a way, but the cavils of the convict.

When I see men ignore the force of the most powerful arguments and turn away from them, and fix their attention on some minor or imaginary difficulty, I am always reminded of an instance, once mentioned to me by Remenyi, the violinist, of a musical friend of his who on being driven from one position after another in defence of his carnivorousism finally refused to budge, because, he said, 'What should we do for catgut?'

This catgut anxiety of the violinist suggests another anxiety sometimes palmed off by people in discussions of the ethical problem when they suddenly run out of facts, but have plenty of persistence left—the anxiety as to 'What would become of the Eskimos?'

What *would* become of the Eskimos, I wonder, if the people of America or Europe should ever be overcome by the impulse to do dietetically what they know very well they ought to do? I *imagine* they would go on eating blubber, and trading wives, and omitting their baths pretty much as they do now, and as they have done from time immemorial. American or European reform *would certainly not* bring upon these children of the snows any pestilences, earthquakes, or qualms of conscience, as one who sees the solicitude depicted in the faces of temperate latitude carnivora, when they are about to be deprived of some of their sins, might be led to suspect.

Are we to remain barbaric until all are civilised? Can no one ethically outstrip the lowest? If we are to wait for the Eskimos, then why not generously extend our ethical procrastination to the Congo cannibals and the Bornean head-hunters? Indeed, why should we limit our justificative resources to men? Why not launch boldly out on the expanse of general animality and ascertain what the 'wild waves' of this promising but seldom-navigated sea are saying? There is the shark, and the spider, and the man-eating tiger, and that well-known cetacean that made such a mess of Jonah. Why neglect such wealth, such plethora of logical consequences?

We are not licensed to continue in sin by the fact that our favourite brand of transgression exists, and will probably continue to exist, in the Arctic parts of America or Asia, nor even by its

presence and probable immortality in the next town. It may even be urged that the obligation to respect the Sixth Commandment rests with reasonable weight on one occupying apartments in neighbouring proximity to a thief.

Does anyone suppose that the question of European chastity has anything to do with, or is in any way dependent upon, the sexual usages of Bedouins or birds? Or that the obligation to lead an ordinarily honest life in Illinois or Great Britain is in any way weakened by the fact that a similar standard of rectitude is not maintained, and never will be maintained, by Tahitians and ticks? If we are to eat our fellow-beings because the Eskimos do, and because they are likely to continue to do so, then why not be consistent, and trade wives and omit our baths for the same reason?

People who employ the hyperborean and cat-gut grade of deception are either weaklings or hypocrites. They may be both. At any rate, they are not worth bothering about. They have not arrived at their mental states through logical processes, and they are not likely to be affected by logical processes. The most restful method of dealing with such people, and about the only effective way, although it is not so concise as one could wish, is simply to *let them die off*.

CHAPTER XI

FLASHLIGHTS ON HUMAN PROGRESS

THE world we inhabit is not an ideal world, except to the ninny. It is not such a world as we would pick out if we were choosing, unless the assortment from which we were to make the selection were a pretty hard batch. It is so full of inconveniences in the first place—so much so that it seems sometimes that it must have been whittled out in some idle hour, without any idea that it would ever be used for anything, and then, when organic beings came into existence, it was given to them as a place to grow up and fight it out in, because there wasn't any other place for them to go. Then, again, it is inhabited by a lot of species that have acquired their natures through an apprenticeship of crime and militancy extending back millions of years into the past.

But it is all the world we have. It is our world. And whatever glooms beleaguer it, there is one star that shines ever, as the most inspiring and fascinating fact accessible to the mind of man, and that is the star of Progress. Whatever the world is, it is *better* than it *was*. And this is true,

whether we think of the far-stretching eras of biology or the nearer prospects of human history. The ages have been slowly but irresistibly picking up.

‘Once we thought all human sorrows
Were predestined to endure ;
That as men had never made them,
Men were impotent to cure ;
That the few were born superior,
Though the many might rebel—
Those to live upon the fatness,
These to pick the crumbs that fell.’

There was a time, before meteorology, when men believed that storms, lightnings, and the like were caused by the devil, ‘the prince of the power of the air,’ and that one of the best ways of warding off these calamities was by ringing cathedral bells consecrated for the purpose. Church bells all over Europe were baptised, sometimes with water brought from the Jordan, and on the approach of storms these bells were rung in order to put the hellish legions to flight. This belief in the diabolical character of atmospheric disturbances was not confined to the ignorant, but was shared in by all classes, including the Pope, and by Protestants as well as Catholics, Luther himself declaring that ‘a stone thrown into a certain pond in his neighbourhood would cause a dreadful storm because of the devils kept prisoners there’ (10).

It was also believed that certain human beings, chiefly women and children, were able, by means

of charms, magic words, or direct bargainings with the devil, to invoke the enmity of these malefic powers of the air on whomsoever they wished. These persons were called *witches*, and the power supposed to be exercised by them over their satanic servants was called *witchcraft*. It was believed that the reason why witchcraft was more common among women than men was on account of their having a larger amount of 'original sin.'

The conviction that human beings possessed this power and used it, was so rooted in the minds of men that for centuries it was dangerous to argue against the superstition, or even to doubt it. Witch-hunting was a business—not a very dangerous business, to be sure, for its prosecution involved nothing more serious than the arrest, torture, and execution of the most defenceless members of the community, but a business attractive to many natures for this very reason. It offered a rich field for specialisation along lines that were free from personal risk of any kind, and were at the same time highly barbaric. There are a lot of bullies in the world yet who like jobs of this kind—where they can bluster and shoot and play the savage generally without being in any danger themselves. Some of them go out and shoot down the little brown children of distant islands, and some find their intrepidity catered to by the poor harmless inhabitants of the fields and hedgerows.

The Popes appointed witch-finding inquisitors to scour Europe for suspects, and into their hands

put the Scriptural injunction, 'Thou shalt not suffer a witch to live' (Exod. xxii. 18). And 'the clergy were exhorted to leave no means untried to detect sorcerers, especially those who by evil weather destroyed vineyards, gardens, and growing crops' (10). Suspected persons were seized all over Europe, thousands of them, and dragged in terror to the chambers of the Inquisition. Here they were tortured, the idea being to find out whether they were guilty or not. Sometimes they were held naked over flames; at other times they were restricted to contact with hot irons (10). They were generally allowed experiences that were sufficient, when properly administered, to induce them to acknowledge that they had ridden on broomsticks to the witches' sabbath, raised tempests, and produced diseases.

Human beings are not made of asbestos; neither are they endowed with the power of abolishing their nerves in emergencies; and few of them there are indeed who will not lose a good deal of their fastidiousness as to what they assent to when they are maddened by the fiendish application of red-hot temperatures. It is allowable to prevaricate, if it will do any good, in the hellish extremity of being broiled alive. In the old judicial records of Germany and other countries of Europe may be found to-day by tens of thousands the pitiful confessions of these poor, pain-crazed creatures, who chose death by convicting themselves in order to minimise the insufferable agonies of the Inquisition (10).

It is impossible for one who has not examined into the history of witchcraft to realise the extent to which this superstition has contributed to the miseries of mankind. It was not exclusively a Christian superstition, as is generally supposed, although it reached its highest development in Europe during the Middle Ages. It existed before Christianity, and independent of it. One of the laws of the Twelve Tables of Rome, promulgated 450 B.C., was that no one should remove his neighbour's crops to another field by incantation, nor conjure away his corn. No crime was more common throughout the Middle Ages in Europe than the supposed crime of witchcraft. One entire title of the Code of Justinian (A.D. 533) was given up to the subject. A single Lorraine judge boasted that he had sentenced 900 when he was still in the midst of his activities. It was an easy matter to convict, for things were arranged with that in view. Witnesses, incompetent in ordinary cases, were, on account of the supposed gravity of the offence, qualified to give evidence in a case of witchcraft—*against*, but *not for*, the accused.

'In the French province of Languedoc alone,' says Dr. Oswald, in his 'Secret of the East,' 'the man-hunters of the Holy Inquisition spilled more human blood than ever reddened the sands of the Roman arena.' And a large part of this blood-letting was directed against witchcraft.

A witch, when convicted, was always tortured into naming her accomplices, and she naturally named those whom she hated or envied. It was

on this account, more than any other, that witchcraft spread, and those shocking exhibitions of history were given, when whole communities became head-hunters and the fairest and noblest went down in the passion-storms of fanaticism. In a letter written by the Chancellor of the Diocese of Würzburg in 1629, we find the following, which gives a glimpse of one of these witchcraft epidemics :

‘There are still 400 in the city, high and low, of every rank and sex, including even clerics, so strongly accused that they may be arrested at any hour. Some out of all offices and faculties must be executed—clerics, doctors, Electors, Councillors, city officials, and Court Assessors. There are law students to be arrested. The Prince-Bishop has over forty students who are soon to become pastors. Thirteen or fourteen of these are said to be witches. A few days ago a Dean was arrested, and two others who were summoned have fled. The notary of our church-consistory, a very learned man, was yesterday arrested and put to the torture. In a word, a third part of the city is surely involved. The richest, most attractive, and most prominent of the clergy are already executed. A week ago a maiden of nineteen was put to death, of whom it is everywhere said she was the fairest in the whole city, and was held by everybody as a girl of singular modesty and purity. She will be followed by seven or eight others of the fairest and most winsome. There are children of three or four

years to the number of 300, who are said to have intercourse with the devil. I have seen put to death children of seven, and promising students of ten, twelve, fourteen, and fifteen. There are persons of yet higher rank, whom you know and would marvel to hear of. But I cannot, and must not, write any more of this misery.'

Witchcraft was one of the worst superstitions that ever afflicted the human mind. It hung upon the world for fifteen fearful centuries, and it was not until comparatively recent times that it was shaken off. The writings of Shakespeare indicate that it was universally believed in in his day. Blackstone considered it undeniable; so did the people of Salem, Massachusetts. Witches were judicially executed in Mexico as late as 1873; and far along in the eighteenth century John Wesley, the founder of Methodism, declared that 'unless witchcraft is true nothing in the Bible is true' (10).

On the 24th day of May, 1543, Copernicus proclaimed his well-known theory of the solar system—the Copernican or heliocentric theory. For twenty years the great Pole had revolved this theory in his mind, but was afraid to publish it. He feared the ferocity of his fellow-men. The Ptolemaic conception, that the earth was fixed and around it as a centre circled the sun, moon, and stars, was so unreservedly accepted by everybody, and was supported in the popular mind by such incontestable proof that no one but a knave or a noodle was supposed to be adventurous enough to question it.

Copernicus was led to doubt the old conception on account of its complexity. The complicated system of cycles and epicycles, which had been formulated by the metaphysical schoolmen, did not seem to him simple enough to accord with Nature as he observed it every day around him.

They told him that, if the earth rotated, the water and air would be thrown off by the force of rotation, like water from a grindstone. This was the most common objection to his new theory, and was considered by its authors as absolutely conclusive.

Copernicus replied that these fluids were a part of the earth, were endowed with the same motions as the solid parts, and hence necessarily moved with these solid parts.

Another argument that was commonly used against the new idea, and one that was supposed by its authors to be capable single-handed of knocking the stuffing out of anything Copernicus might say, was that men and animals and all other beings that have the power of moving have limbs and muscles by means of which they produce their motion. But the earth has no such things as limbs and muscles. Therefore, how could the earth move?

It was commonly felt, in addition to the inherent absurdity of the doctrine, that the dignity of the earth was seriously impaired by the new theory, which practically turned the earth loose in space, with nothing to do but dance as a subordinate around other centres and spheres. This, of course,

would not do at all. Man was plainly, as anyone could see for himself by looking in a mirror, too august a being to have such a renegade place of abode as that. Was not the earth a 'footstool'? Could a footstool do what would naturally be expected of it if it were sailing around in space all the time?

How these old fogies of the ancient world remind us of a lot of people who are living now—especially those who worry about what would become of human dignity if man should turn out to be an 'animal.' Is human dignity more precious than truth? Is it of any importance at all, in fact, if it is a mere fiction? And is it not about as harmful to human dignity as anything we can do to resort to the ostrich-like trick of sticking our head into the sands every time we imagine ourselves in peril of seeing something we never saw before?

Copernicus replied to his critics that it seemed more in keeping with the fitness of things for the earth to move about than for heaven to do so. And this seems forceful: for it would certainly be more convenient to have an itinerant foot-rest than a peripatetic throne. He said heaven was the most honourable place in the universe, and was for this reason also the most likely to be stationary. If the sun, moon, and stars moved around the earth, he argued, they would have to move so much farther than the earth, and at so much greater speed, that they would be more liable than the earth to be dashed to pieces.

Copernicus was on his death-bed when a copy of his book was brought to him. He touched it, and expired a few hours later.

People generally, both Protestants and Catholics, denounced his theories as absurd in themselves and contrary to the plain teachings of Scripture. The people of Nuremburg had a medal struck with inscriptions ridiculing the philosopher and his teachings. 'This fool,' said Luther, with characteristic assurance, 'wishes to reverse the entire science of astronomy. But sacred Scripture tells us that Joshua commanded the *sun* to stand still, *not* the *earth*' (10). Melanchthon, the disciple and co-labourer of Luther, was not less intolerant than his master toward the new astronomy. 'The eyes are witnesses that the heavens revolve in twenty-four hours,' said he; 'but certain men, in order to make a display of their learning, have concluded that the earth moves. Now, it is a want of honesty and decency to assert such notions publicly, and the example is pernicious. Such impious teachings should be restrained. The earth can be nowhere if not in the centre of the universe' (10).

The experience of Copernicus is not an unusual experience. It is simply the experience of every one who attempts to add anything of importance to the scanty stock of human information. Men do not want to improve. They want to be comfortable. They want to be let alone to doze away their dreamy existences in the lazy seesaws of respectability. And a man who starts out, in

a world like this, with the intention of introducing great and lasting improvements in the stream of human consciousness may add to his outfit of precautionary wisdom the assurance that he will sooner or later have a world howling at his heels.

Happy the land that knoweth its prophets before
they die !
Happy the land that doth not revile and persecute
them during their lives !
Was there ever such a land ?
We are still engaged in the ancient pastime :
Building monuments to the prophets of old,
And casting stones at the seers whom we meet in
the streets.'

One of the most memorable martyrdoms in all the long, dark history of the evolution of human thought was that of Galileo. It was Galileo's misfortune to be the first human being to look through a telescope. About the first things he saw on looking through his little glass were the moons of Jupiter. This was the beginning of his troubles. He was promptly informed that he was an impostor, and that he did not see any such things as he said he saw. In the first place, Aristotle knew nothing about such things as moons of Jupiter. And, to the people of the Middle Ages, what Aristotle did not know about did not exist, or, if it did exist, it was not worth bothering about. In the second place, there were seven planets already. And the Bible showed by all applicable types that there could not be any more. The seven golden candlesticks of the Apocalypse, the seven-branched candle-

stick of the Tabernacle, and the Seven Churches of Asia, all proved this. Anyway, the proper way of arriving at astronomical truth, Galileo was told, was by reasoning on texts of Scripture, not by presumptuously poking and prying about among the works of the Creator with a magnifying glass.

But the little telescope by the Adriatic continued to sweep the heavens. Night after night the enraptured seer sat in his Florentine observatory and gazed up into the wonders of the Italian sky. Finally he wrote a book. He said it looked to him as if the sun, moon, and stars were spherical instead of flat. He boldly affirmed that he could see spots on the sun, and mountains and valleys on the moon. And he even intimated, and this was the most flagitious of his avowals, that the seeming revolution of the heavenly bodies around the earth every twenty-four hours might turn out to be due to the gyrations of the earth itself.

This was highly calculated to enliven the dry bones. It was, indeed, breaking sod; and it required the spirit of the hero to say such things in an age when everybody believed the opposite, and when it was a crime for anyone to think differently from what every one believed. We think sometimes that it takes a good deal of heroism to-day to be an advocate of reform when the tendencies are so triumphantly against us. And it does, if the reform amounts to anything. But the situation which confronts the reformer to-day is generally much milder than that which

Galileo faced. The forces of intimidation are still in the world, and they are the same old reptilian lot that struck down the liberties and threatened the life of the great Italian. But they are less powerful.

All reforming is uphill work. It means tackling the most powerful and ferocious inertias of the race. And the soul that has that summery nature that loves to drift with the stream had better keep out of it. A man cannot really be classed with those special mortals who move the world, unless he has the momentum to encounter *some* hardships and submit to *some* outlay for the sake of ideas which he knows to be priceless. *Heroes* undergo *anything*.

The upshot of Galileo's teachings was that he soon found himself in a hornet's nest. Pope, priests, and people denounced him as a wild and dangerous heretic; and the greatest scholars of his time, true to the instinct of scholastic minds to always get on the obsolete side of everything, advised him openly to put his head under the pump. Was it not recorded in Holy Writ that 'the sun runneth about from one end of the heavens to the other'? And did not the sun stand still for Joshua? How could the sun pause, even for so public-spirited a purpose as to allow a Hebrew chief to open the veins of a few more of his enemies, if it were not at the time moving? Are we not also informed in holy literature that 'the foundations of the earth are fixed so firm they cannot be moved'? How could

this plain assertion be reconciled with the new-fangled nonsense that the earth is spinning round like a whirligig?

A committee of theologians appointed to examine into the claims of Galileo, after solemnly considering the matter for a month, rendered the following unanimous decision: 'The first proposition, that the sun is the centre, and does not revolve about the earth, is foolish, false in theology, and heretical, because expressly contrary to Holy Scripture; and the second proposition, that the earth is not the centre, but revolves about the sun, is absurd, false in philosophy, and, from a theological point of view at least, opposed to the true faith' (10). Pope Paul V. confirmed the action of the committee, and solemnly decreed, with all the authority of his infallibility, 'that the doctrine of the double motion of the earth about its axis and about the sun is false, and entirely contrary to Holy Scripture.' It was further decreed that all writings that affirmed this theory should be proscribed, and that the theory should be neither taught nor advocated.

In vain did Galileo try to save himself by arguing that literal interpretation of the Bible should not be applied to science. In vain did he urge his opponents to look through his telescope and see for themselves the things which he saw—the sun-spots, the satellites of Jove, and the lunar mountains. They either refused to look, because it was 'impious,' or, if they did look, they declared that what they saw were illusions of the devil, one

guileless old Father going so far as to say that 'to see satellites of Jupiter men have to make an instrument which creates them.'

Galileo was a heretic, and that was all there was to it. He was deliberately engaged in damaging the dignity of his native clod, and he was a bold, bad man or he wouldn't do that. He was a discoverer of inconveniences—of facts which cast an unpleasant doubt over traditions which had come all the way down from savage times, and which were very precious to priests.

Poor Galileo! Poor anybody who happens to be bigger than the pinheads of the age and land in which he lives!

'For him the hemlock shall distil,
For him the axe be bared,
For him the gibbet shall be built,
For him the stake prepared.
Him shall the wrath and scorn of men
Pursue with deadly aim,
And malice, envy, spite, and lies,
Shall desecrate his name.'

In a letter to Kepler, 1597, Galileo shows that he realised the weakness of human nature and the gravity of the situation in which he was placed much better than he is generally credited with doing. 'It is unfortunate,' he says, 'that those who seek after truth and follow no false methods are so rare. Many years ago I embraced the opinion of Copernicus, and, from this standpoint, I have been able to find the causes of many natural phenomena which are certainly inexplic-

able on the ordinary hypothesis. I have written down many principles and many refutations, which, however, I have not dared to make known, as I have been deterred by the fate of our great teacher Copernicus. He, it is true, won undying fame among a few, but among the multitude (there are so many fools in the world) he was only an object of scorn and laughter' (10).

This characterisation of the multitude by the great Italian, which is relatively as applicable to-day as it was 400 years ago, reminds one of the caustic blurt of Carlyle, that England is inhabited by a certain number of millions of human beings, 'mostly fools.'

Galileo was brought before the Inquisition at Rome—not once, but twice, the last time when he was a man seventy years old—and compelled by threats of torture and death to renounce his discoveries. His works were forbidden to be read, and he was reviled and persecuted to the end of his days. He was kept in exile from his family and friends, and never permitted to speak of his theories. He was forced to listen to attacks on himself and his works in silence. Even during the last days of his life, when he had become blind and wasted with sorrow and disease, he was still hounded by a wretched surveillance. He lived to see the truths he had discovered carefully weeded out of all the schools and Universities of Europe. He happened to be referred to once just before his death in a complimentary way as 'renowned' by an author of a scientific work, but

the vigilantes of the Church compelled the substitution of the word 'notorious.' His last work, 'Investigations into Two Sciences,' published only four years before his death, was printed in Holland in order to escape the censor.

His life went out in darkness. He was blind, dishonoured and despised, an exile from his family, without friends and without hope, alone, without a single healing circumstance to soothe the desolation of his dying hour. He begged to be buried in his family tomb, but this even was refused him. He was buried alone, without honour or ceremony, and no man was permitted to place a stone to mark the resting-place of his bones—all because he had found out new truths—had taught clearly for the first time those things which are to-day known by every school-child in the world.

The story of Galileo is one of the most mournful in the history of the human species. It is sad to see a great man like Galileo terrorised through life by threats of punishment and death, and his memory insulted by a lot of bigots too narrow-minded to appreciate him. But it is compensating to reflect that, while the clay of this mighty man was covered in dishonour by the infinitesimals of his time, the truths he had discovered lived on. *There are always a few brave men and women mixed up with the pusillanimous mass of every generation, even in the world's darkest periods, to hold aloft the torch of progress.* Within 200 years after Galileo's death, the truths for which he contended, and on

account of which he was silenced and spat upon, were accepted by the whole thinking world.

‘ They never die who fall
In a great cause. The block may drink their gore,
Their heads may sodden in the sun, their limbs
Be strung to city gates and castle walls.
But still their spirit walks abroad. Though years
Elapse and others share as dark a doom,
They but augment the deep and sweeping thoughts
Which overpower all and turn the world
At last to *Progress*.’

Before the days of geology, before men had come to understand the true nature and origin of the rocks, or to comprehend in any measure the great age of the universe, the account of the origin of things found in the Genesis of the Hebrew Scriptures was taken literally. The Creator was commonly conceived to be of human form, and was often represented sitting, like a Nuremburg toy-maker, with thoughtful brow and knotted muscles, busily engaged in making the sun, moon, and stars and hanging them in their places in the heavens. The palæontological remains of animals found in the crust of the earth were supposed to be ‘freaks of Nature,’ ‘the bones of giants slain in ancient battle,’ or the cast-off ‘models’ made by the Creator before he had fully made up his mind as to what would be the most suitable style of structure for various species. Later, when fossils came to be recognised as the remains of actual animals, they were accounted for on the hypothesis that they were the bones of animals that

had perished in the 'flood.' Only in recent times, rendered for ever illustrious by the extensive supremacy of rationalism, have men come to realise that the stories of the genesis of things bequeathed to us by the ancient Chaldeans through the Jews are mere myths, that the earth has slowly evolved to be what it is, and that this evolution has extended through periods of time so vast as to be measured in millions and hundreds of millions of years.

It seems almost incredible, but for 150 years after the establishment of public schools in Boston girls were entirely excluded. The laws of Massachusetts provided that all children should have the benefits of the public schools. But 'all children' was everywhere interpreted to mean all *boys*. It was considered indelicate for girls to know anything. Girls were ivies, and their business was to grow up and find oaks. They could not rock the cradle by arithmetic, it was argued, and why should they study it? Why should men educate their shadows?

In 1839 Oberlin College, Ohio, opened its doors to women and negroes. This was the first school of higher learning in this country to admit women. To-day 50 per cent. of the college graduates of this country are young ladies, and two or three girls graduate from the high schools to one boy. In 1848 the first woman was graduated from a medical college, and began the practice of her profession amid sneers. The next year New York gave civil rights to women. Up to this time the old

common law of England had been in force in all the commonwealths of the United States. According to this old common law, a woman legally ceased to exist the day she was married. What little substance and personality she had managed to maintain in the eyes of the law before marriage vanished at the nuptial altar, and she became henceforth a reminiscence, a legal memory, a mere incident of the great being into whose almighty clutches she and her destinies for ever passed.

In 1850 the first women's Convention met at Worcester, Massachusetts. Except by the prophets of the country—the men and women who walk at the head of the procession or a little in front of it—this convention was looked upon as ridiculous, if not shameful. Very few, indeed, were enlightened enough to utter a word of encouragement to those brave pioneers. The merry-andrews of the newspapers—who never understand anything until it has been considered and accepted by everybody else, and become so familiar to the common mind as to be about ready for presentation to lunatic asylums—got a great deal of amusement out of it. They called it the 'hen convention.' Preachers denounced it, of course. It would not have seemed quite natural if they had not. For women to stand up in broad daylight and make speeches and hold a convention, all by themselves, was 'going a little too far'—was violating a little too literally the suggestion dropped by Paul as to the fitness of vocal inactivity for women. In the evening of the convention Lucy Stone spoke, and one of the

pulpits of Worcester announced her meeting in these words: 'To-night, at the town hall, a hen will attempt to crow.'

Only a little while ago, so recently that most of us can remember the time, the word 'socialism' was something which was used chiefly to throw at people. It was an epithet of disgrace—a sort of verbal brickbat. It was generally coupled with 'anarchism,' and when hitched up in this way it was especially effective, for it added to its own odium the odium of association. To call an individual a 'socialist and anarchist,' and accompany the accusation with considerable vocal energy and a convincing toss of the head upward and backward, was for a long time the favourite method of plutocracy of disposing of its opponents. The method was popular because it was economical. It required no thinking. And this advantage alone was sufficient to recommend it to those lacking the conveniences for reflective activities.

Socialism and anarchism! Dear old two! How faithfully and well, on many a hard-pressed occasion, when argument was scarce, and it was necessary to crumple the opposition by some other method, have you served the scribes and Pharisees of this world against the champions of the new order!

But socialism has been promoted. It is no longer a missile—at least, it is no longer used to kill people with. It has been upholstered. Hit a man with 'socialism' to-day, and the effect is so soothing that he is likely to think that he has been

caressed. Socialism is believed in by too many people of brains and avoirdupois nowadays to be insulted and kicked around like a dog by every scalawag that happens to come along. Scholars and litterateurs, and even mayors and millionaires, are advocating it. Men are putting it into books, and handing it out from lecture platforms, and even advertising it for blind people in poky newspapers. And look out! It will have teeth some of these days, and be wondering how it will feel to live in the White House.

Oh, the world is growing, and in no way more surely than in its understanding of the inalienable rights in this world of the common man!

Socialism is inevitable. It is right. It is in the line of least resistance. It is on the way to the highlands—on the way to Real Civilisation, not the starched, hypocritical, supposititious, so-called kind palmed off by pietists and pickpockets, such as we are called upon to contemplate and endure around us to-day, but a civilisation based on the shining and imperishable foundations of Brotherhood and Mutual Love.

The present system of human industry is a system of cannibalism. We eat each other. It is simply reptilian to every one who is able to realise its true nature. It is the cause of inestimable ill-fare to the human race. The great mass of men and women are nothing but cobble-stones for the lazy and Pecksniffian few to walk on. Nobody doubts the possibility of a better arrangement, except bandits and blockheads.

No man has a right to a million dollars. If so, where did he get the right? Not from Nature nor reason, but from man-made legislatures—from the same immaculate source from which he got the right a little while ago to cut the blood out of the backs of poor helpless Africans with hippopotamus whips. No man has a right to monopolise the world to the extent of a million dollars. It is more than one man's share—*much* more. We are *brothers*. The world belongs to all of us, not to any one class. A million dollars in one hand means over-appropriation — *plunder*, too often scaped with fiendish unconcern from the bleeding palms of the poor. Every millionaire or multimillionaire that wallows in golden mud-puddles compels hundreds of other men to go through life deprived of their birthright. I would be *ashamed* to be rich, and I would be *ashamed* to know that I had my share of the world and the shares of hundreds or thousands of my fellow-men besides. If there is one thing that ought to be plain, even to simpletons, it is the fact that the privilege of being born carries with it the right to an inalienable equity in the world in which we at birth find ourselves. It is not true, however prevalently it may be practised, that men acquire the right to own and hold and use the earth, and to exclude others from its use, by being born with the power or opportunity to get possession of it.

We feel and realise far too feebly the frightful condition, the blistering, heathenish inequalities, of this world. We no longer 'point with pride to

the noble institution of human slavery,' but we are still in that state of moral irresponsibility where we view with indifference the great mass of men and women hanging on crosses their whole lives long in order that their executioners may blaze on boulevards, sail purple seas, and eat the shining apples of idleness in dream-like palaces of pleasure. Human altruism and realisation are in infancy. We stand in the presence of wrongs and sufferings that ought to make our very viscera crawl, and yet we are so phlegmatic and primitive we do nothing more dynamic than sigh.

This is the age of grab. The money hogs sit on their thrones of gold and crunch the world. They are just now engaged in an unusually frantic scramble to gobble up the earth—what little of it has been so far overlooked by them. A Christian and edifying spectacle, certainly! 'Do not do to others as you would be done by, but unhesitatingly "do" others,' is the motto of these soulless gluttons. The gods of the common people are so sound asleep that their snores resound to the seventh heaven.

The present system of industry is not a system which was created by reasoning beings. It was foisted upon us by a barbarous past. It is tolerated because we are in the night. It is respectable because we are asleep. It will pass away. *Why should* men compete when they may co-operate? *Why should* they fight and destroy each other when they may live together in sweet fellowship? *Industrial courtesy* rests on the same con-

siderations of general utility, and is a quality as becoming and necessary to a civilised people, as personal courtesy. War, poverty, expropriation, parasitism, and industrial chaos—these things will not always be. If not to us, then to the more luminous beings who are to come after us, will come peace, co-operation, good-will, brotherhood, hope, happiness, and enlightenment—that grand climacteric of sympathy and oneness toward which evolution has urged us ever since the original inhabitants of this world, the one-celled protozoa of the primeval seas, gave up Individualism for Mutualism, and became the successful organisms of this sphere a hundred million years ago.

Many people now living were in existence in 1859, when Darwin's 'Origin of Species' appeared, and know something of the ferocity with which this great work was assailed by all classes of people. Not only the priests, who hated it because it invalidated a lot of stuff they had been teaching, but by people generally, who thought simply what somebody else thought, and even by scientists, who ought to have known better, but who are often blind when it comes to new ideas, the book was denounced as a dangerous and preposterous work.

It was something new. It was a revelation. And it came into the world like a plough into an ant-hill. The intellectual complacency in which the human mind had luxuriated for indefinite ages was split wide open. It was like waking a man up out of a deep sleep by hitting him over the head with a stick.

People were pretty busily engaged at the time, and had been for centuries, on such questions as whether the animals went into the ark by twos or by sevens, whether the world was made in six days or instantaneously, and whether the Creator, when he made the universe, had actually used his hands or his voice, the Scriptures themselves encouraging discussion by providing evidence in favour of all of these views. When a man appeared in the world, therefore, with a book which affirmed that men were barking up the wrong tree entirely, and that the world was *not made at all*, it was about what was to be expected that the whole outfit should be made as mad as, if not madder than, wet hens.

Another question that consumed a considerable amount of the intellectual energy of the time, and had long claimed a good deal of human attention, was the question as to the exact character of the raw material used in creating man, one school arguing that it was *mud*, another maintaining that it was *nothing*, the Scriptures, with their usual impartiality, supplying ammunition to both sides. And, considering that human nature is what it is, it was natural to expect, too, that a man or a book would receive a pretty warm reception who would precipitate into this controversy the suggestion that it was neither mud nor nothing that man had come from, but a *monkey*.

As an extreme illustration of how men wasted their powers in expeditions after rainbows, before Darwin gave them something serious to think

about, we may cite the case of a distinguished Doctor of Divinity of Cambridge University. It was his plan to ignore the whole question of the *material* used in Adam's construction, and go directly to the heart of things. So he plunged into an exhaustive search of the Scriptures to see what he could bring forth in the way of something definite as to the *time* of man's appearance on the earth. He succeeded. As a result of his long search and prodigious meditation, he found, so he declared, that 'man was created by the Trinity on October 23, 4004 B.C., at nine o'clock in the morning' (10).

The 'Origin of Species' was the result of thirty years of work and thought by one of the rarest geniuses that ever flowered in this world. It was a storehouse of facts collected with great care and industry through many avenues of information from all over the world. These facts were presented with such fairness and in a spirit of such childlike candour as to win for Darwin afterwards the reputation of being a model investigator. Darwin was a man of singular, almost super-human, honesty, and he was as long-suffering and generous almost as Jesus. He was one of the few persons who always made it a point to call attention to the weak places in his own argument, to dwell upon and almost advertise them, and to state the attitude of those who differed from him with the same skill and anxiety as he did his own. He was often abused, but it was always on account of the novelty of his cause, or the malignance of

his critics, never once in all his life because he deserved it. He was, perhaps, as well fitted as anyone for submitting himself to the executioners of his time in undertaking the toilsome and thankless drudgery of aiding new ideas into the world.

A few of the more emancipated minds of the time, like Huxley, Spencer, Wallace, Tyndall, and Haeckel, recognised clearly the true character of Darwin's work, and acknowledged promptly that his message was one of the most important that had ever come to the world. Huxley was especially admirable. His inestimable services at a most trying time should never cease to be remembered by the lovers of truth. He was called 'the watchdog of Darwin.' At the very outset he ranged himself alongside of Darwin, and by his brilliant powers of disputation, his terrible logic, and his magnificent courage, did more than anyone else to hurl back the storm of opposition which Darwin's book had stirred up. No one could withstand Huxley. He was a whole army—clear, eloquent, cold-blooded, invincible. He had the unconquerableness of a great soul in flames, and enlisted in a cause which it knows to be right. His sentences were bullets. His logic was a gleaming lance. His sarcasm scorched like lunar caustic. When the Bishop of Oxford, in a public speech in the presence of Huxley, taking advantage of prevailing prejudices, congratulated himself that he was not descended from a monkey, Huxley flashed back the historic retort that if he had to choose he would rather be the descendant of a respectable

monkey than of a man who employed his powers in misrepresenting those who were wearing out their lives in the search for truth. Wallace, the co-discoverer with Darwin of evolution, gave his unflinching loyalty to the doctrine; and Haeckel and Spencer, with transcendent perception, expanded it into all the wide fields of science and philosophy, bringing forth out of their imperial understandings those immortal monuments of generalisation which have earned them unending renown.

But outside this little smattering of premiers of science, looming here and there over the world, there was almost unbroken scepticism and hostility. It was ludicrous. Many seemed to feel that one of the worst things about the new doctrine was the way it treated the 'Almighty'—impairing his dignity so, and undermining many of his choicest and most venerable functions. They seemed to think that if evolution was true, God wouldn't have anything to do, and would have to read novels or go fishing in order to kill time. Mr. Gladstone, eminent as a politician but a mere child in science, was one of these. In an address at Liverpool he said: 'Upon the grounds of what is termed evolution, God is relieved of the labour of creation, and in the name of unchangeable laws he is dismissed from the superintendency of the world.' Which is about true. But what of it?

Herbert Spencer called Mr. Gladstone's attention to the fact that the same thing which he complained of as having been done by Darwin had

already been done by Newton in his law of gravitation, and by Kepler in his laws of astronomy. But Mr. Gladstone conveniently failed to see the point, and relieved himself by sending a rhetorical sky-rocket to the *Contemporary Review*.

The editor of the *Dublin University Magazine* went Mr. Gladstone one better by charging Darwin and his band with being 'resolved to hunt God out of the world.'

How pitiful! How anthropomorphic and childish the human mind can be when it takes a notion! And what an incomparable weakling the Lord of Cosmos must be, anyway, to permit himself to be put to rout by an Englishman and banished from the universe by a book!

We live to-day in a brighter age—although, compared with the future, it is an age of unlimited darkness and imbecility. We cannot yet point to a complete triumph of the doctrine of evolution, but we can say that it is getting along very well. We are at least getting used to it. We don't understand it yet by any means, but it has lost most of its terrors. About all of its enemies of importance have passed into the infinite azure of the past. The chief opposition to it now comes from those who don't know anything about it. These are generally the last ones to give up on an occasion of this kind. They are handicapped by the lack of facilities for knowing when they are whipped. The Church is pretty evenly divided on the subject. In the realms of the natural sciences the success of evolution may be considered

complete, and it is invading rapidly those regions of human knowledge lying farther and farther from the sciences of its birth. *It is destined finally to revise and rationalise every field of human thought, and to work on organic phenomena, as a whole, the profoundest and most far-reaching effects of any revelation that has thus far flashed on the children of men.*

CHAPTER XII

CONCLUSION

WE are slaves of the past. One trouble is, we are babes before we are men. The foundations of our psychology are laid before we are aware of it, in the plastic period of infancy, when all of us, like little peeperless birds, with wide-open mouths and utter abandon, swallow unsuspectingly whatever is put into our mouths.

It is not true that we are free. We are free to do only that which we are destined to do. We do not choose our natures or our minds any more than we do our appearances. We are cut out by the universe, of which we are but parts, receiving our ways of acting from the clays that compose us when we come into the world and the circumstances that surround and beset us.

It is well for us always to know the facts in so far as we are able to ascertain them. It may be restful to shut our eyes to unpleasant actualities, but it is never wise to do so. Shutting our eyes to difficulties has no more effect on those difficulties than simply to make them invisible. The universe

cannot be twisted this way or that to suit our traditions or desires, however firmly we make up our minds to that effect—a great many well-meaning but twilight-tinted understandings to the contrary notwithstanding.

If we realise that the past is over-influential in our lives, that very realisation may cause us to put forth more violent and intelligent efforts to cut loose from it. If we know that it is very difficult to grow and still more difficult to keep on growing, but very profitable and divine to do so, we shall be less likely to be so sedentary as to read the same newspaper for forty years and vote for candidates that are already dead. To know absolutely that one is a fool is the best possible preparation for distinction in more honourable and remunerative lines.

The great tendency of the human mind is to repeat itself—to go round and round. It is the Law of Association. This tendency grows stronger and stronger, and more hopeless and fatal, as the months and years of our too-brief lives pass away. The sceptic, therefore, is the flower of the universe. We *must* doubt, if we would avoid going about as dead-and-gones long before we are buried. We should doubt our very doubts. It is not easy to doubt too much, although it is, of course, possible to do so. We should overhaul ourselves with increasing frequency and enthusiasm, and get out new editions of ourselves, and see how much we can leave out.

We should feel more at liberty than we usually

do to think differently from what we once thought, and especially to be at variance in our ways of looking at things from the ways of our fathers. Many propositions will come to us seeking hospitality and approval. And we should be in a position to believe *anything* that appeals to us as being reasonable and right. When propositions which seem reasonable in themselves fail to fit in with what we already have, there is something wrong. No man is free who has a set of notions so surpassingly precious to him that he is determined to hold on to them at all hazards. There is no light in this world except reason, and this seems sometimes but an *ignis fatuus*. Every individual has, stored away in his *pia mater*, a larger or smaller assortment of ideas which he looks upon with a good deal of satisfaction and pride. But it would be well for us to go over our intellectual stock once in awhile, and see just how much of it is really of value and how much is pure trumpery which has been tucked away there by loving but chuckle-headed relatives in the dim nescience of our antiquity. No sadder calamity can come to a human being than for him to become convinced beyond all hope that he has now, after a greater or less amount of alleged thinking, finally *arrived*. As well get him a pine box, and scoop a little place in the ground, and put him in there, and cover him up. He's *dead*.

Not many men are able to emancipate themselves without help. It requires a courage and an iconoclasm greater than most possess to make

important initiatives. Reform is not natural. It is natural to go on and on and on—to drift and be ‘respectable.’ But after a reform is accomplished, and its principles become matters of course, there are then few persons without the ability to look back and wonder why idiots are so much like men.

In selecting an attitude on any proposition it is well not to rely much on the opinions of others—unless it should be in one of those rare instances which sometimes come to sages, but seldom to the average man, and never to fools, when one happens to have access to somebody who knows more about it than one does oneself. *Beware especially* of the influences of prevailing standards of belief. These standards are nearly always wrong. Yet they exert a powerful influence on every one, and on minds that are not very strong this influence is almost irresistible.

It ought to be perfectly clear by this time that the popularity and unpopularity of propositions in no way coincide with their truth and falsity. It makes no difference how true a proposition may be or how unreservedly it may finally be accepted by mankind, there is always a period in its early life when it is stoned and misunderstood. It has been so throughout the ages of the past; it is true to-day; and it will continue to be true as long as disparities in heroism and originality exist among men.

Remember, when you choose attitudes on the questions that are to-day forcing themselves on

the attentions of men, that there is a future as well as a past, and that there will be other generations to judge those attitudes besides this one. The opinion of the present is nothing really in its importance compared with the verdict of that high appellate to which all things must go for review and final judgment, the Future. When we shall be able to stand at the meeting of the ages and estimate, not as children do but absolutely, the values of all times, we shall be indifferent to the present, but tremble and weep in the realisation that we must stand finally in the supreme scrutiny and splendour of the generations to come.

The world is growing, and it is destined to continue to grow. Future evolution among organic forms is destined to be out of all proportion to that which has taken place in the past. There are forces in existence and at work in the world to-day whose avowed purpose is to abolish the present world and put in its place a New World, free from the mournful limitations of this one. These forces are bound to grow stronger as the ages go by. We can see these forces gathering to-day. And we know—oh yes, we *know*, in spite of the taunts and incredulities of men—that the triumphs of humanity which will take place in this world above the dust of our vanished forms will far exceed anything which we with our comparatively rude understandings can definitely conceive of to-day. *Be careful*, therefore, in choosing your logical affinities, that you do not make the same spectacle of yourself that the revilers of

Copernicus made, and that poor old Webster and other blind men made when they poured cold water down the spines of early Abolitionists.

It is well for us sometimes to get off on one side of the universe, extricate ourselves from all part in its affairs, and look at it objectively, as we might look at a flower, a mineral, or a human being. We are likely in this way to get a more correct notion of our place in the cosmic process than we do when we survey creation from ourselves as a centre. Viewed in this way, the universe is a vast machine, measureless and blind, and operating in obedience to certain unchangeable tendencies—a machine in which worlds are wheels and we but puppet particles dancing our little rounds in one of the corners of one of the cogs of one of the wheels of the mighty mechanism. Our pomp and strut are but the silly vanities of invisible motes. Our problems are solved for us and in spite of us. Our own acts are, of course, factors entering into the solution; for, just as everything that exists is a part of the universe, so everything that happens is on the programme. But our little parts were mapped out for us—just where we were to come on the programme and what rôle we were to play—long, long ago when the atoms chose their natures. Laplace said once that if the position and tendency of every atom in the universe could be accurately ascertained, the entire past history of the universe and the entire future could be mathematically calculated.

The only way to find out what the universe is

going to do in the future is by observing it in the present, and noting what it has done in the past. The universe is an individual. It has a certain nature, just as every individual part of it has. And it can no more change or repudiate its nature, or escape the working out of its destiny, than any of its constituents can, as a lily, a man, or a world. And the universe has been in action now long enough for us to know something about it.

Anyone, therefore, skilled in the interpretation of cosmic behaviour, cannot, from the evidence of the past and the present, well conclude otherwise than that the policy of the future is to be a policy of progress and amelioration. The same tendencies that have produced past evolutions will produce corresponding and even greater evolutions in the times to come. There will be pauses and relapses in the future, as there have been throughout the centuries that have gone by, but these will be but the recessions of a rhythm that is irrepressibly forward. This policy of the future is certain to include the development on the earth of a wider, deeper, and more organic solidarity out of the beginnings to-day existing—a solidarity exemplifying vastly increased sympathy and oneness, not only among men themselves, but extending to all the orders of terrestrial sentiency.

Read history. What have men bled and died for? Read the long, dark Iliad of biology. See where the world has been travelling. We seem to have lived a long time and to have come a long way. And we have. The ages stretch out behind

us like the infinite undulations of a traversed sea. But the past, however large it may loom and however far it may stretch away, is but the prologue of that which is to come. Where we stand to-day and catch but the spray of breaking waves, to-morrow will roll the deeps of universal conviction. Fashions change. There are fashions in feeling and thinking as there are fashions in clothes. And the fashions of the mind come and go, human ideals change, just as surely and in obedience to the same laws of transmutation as the styles in shop-windows. *There are not ten men on the continent of America at this moment who will not, two hundred years from now, be considered as 'back numbers.'* The world is going to keep right on. The world is not old. It is new. It is taking its first steps. HUMANITY IS ONLY IN ITS LARVAL STAGE. The grandest ages are before us—the Incomparable Ages of Virility.

We grow weary sometimes, and discouraged, and feel hope within us slipping away like sands from wave-swept feet. We grow sick of the sneers, sick of the wars and the worms, sick of the cold, horrible altars on which we bleed. But the FUTURE—that is the god to whom we feed our vitals—the long, radiant, ever-unfolding, heaven-born FUTURE!

OH, THE HOPE OF THE CENTURIES AND CENTURIES AND CENTURIES TO COME!

It seems sometimes that I can almost see the shining spires of that Celestial Civilisation that man is to build in the ages to come on this earth

—that Civilisation that will jewel the land masses of this planet in that sublime time when Science has wrought the miracles of a million years, and Man, no longer the savage he now is, breathes JUSTICE and BROTHERHOOD to every being that feels.

